## Aur Dard Scheiber SEARCH REQUEST FORM

Access DBII 17165

Scientific and Technical Information Center Examiner 4: 77512 Date: 31 ZARA Phone Number 30 2 -0765 Serial Number: 09/699,667 il Best and Bldg/Room Location: 2 ) 28 Results Format Preferred (circle): PAPED DISK.E-MA juester's Full Name: nore than one search is submitted, please prioritize searches in order of need. ase provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. lude the elected species or structures, keywords, synonyms, aeronyms, and registry numbers, and combine with the concept or ity of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if own. Please attach a copy of the cover sheet, pertinent claims, and abstract. tle of invention: ventors (please provide full names): \_\_\_\_\_ ferreault 10/30/00 For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the Please Search Seg ID Nos. 65, 66, 5-ma-37 671a-20 3 spa-31 ( See attached 20 - 23) 4-ma-20 27259NO

	*******	*****	1
****	*************	Vendors and cost where applicable	ie
TAFF USE ONLY careher: 0 SchreBer	Type of Search.  NA Sequence (#) 12	STN .	
9:12-454	6 AA Sequence (#)	Dialog	
earcher Phone#:	AG Greature (#)	Questel/Orbit	
		Dr.Link	
nie Searcher Picked Up:	Litigation	Lexis/Nexis	
Lie Compirerd:	- Finjest	Sequence Systems Compages	
earther Prop - Review Time	Patent Family	WWW/Internet	
Herical Prep me:	Other	Other (specify)	<del></del>
Sainse Time9	Quic.		·
oto.1596 (8-01)			

COLORIS MANTH HERE SINH

us-09-699-667e-65.siz.rge

```
March 15, 2005, 12:35:18; Search time 729.614 Seconds (without alignments) 2457.248 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                            1981570
                                                                                                                                                                                                                   1 ggguccaccuccucgcggunnnnnnngggcaugcsby 37
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                       4708233 segs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                  IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                          US-09-699-667E-65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenEmbl:*
1: 90 ba:*
2: 90 htg:*
3: 90 om:*
3: 90 om:*
3: 90 pl:*
90 pl:*
90 pl:*
90 pl:*
90 pl:*
90 pl:*
                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                           Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                          Run on:
```

	uo	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Seguence
	Description	AX012291	AX012282	AX012283	AX012284	AX012285	AX012286	AX012287	AX012288	AX012289	AX012290	AR021007	AR021047	AR043422	AR043462	AR062337	AR062377	AR183796	AR183836	AR368179
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1																		
	ID	AX012291	AX012282	AX012283	AX012284	AX012285	AX012286	AX012287	AX012288	AX012289	AX012290	AR021007	AR021047	AR043422	AR043462	AR062337	AR062377	AR183796	AR183836	AR368179
	DB	9	9	9	9	9	9	9	v	9	ø	ø	9	9	φ	9	9	9	9	9
	Query Match Length DB	37	57	57	57	57	57	57	57	57	57	52	52	52	52	52	52	52	52	52
dР	Query Match	95.7	95.7	95.7	95.7	95.7	95.7	95.7	95.7	95.7	95.7	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1
	Score	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	30	30	30	30	30	30	30	30	30
	Result No.	-	7	e	4	S	9	7	80	o	10	11	12	13	14	15	16	17	18	19

AR368219 Sequence AR21187 Sequence AR231614 Sequence AR23769 Sequence AR23769 Sequence BD078768 Sequence BD078768 Sequence BD085609 Recombine BR085191 Sequence AR1361915 Sequence AR15900 Sequence AR15900 Sequence AR16590 Sequence AR16590 Sequence AR16590 Sequence AR16590 Sequence AR16590 Sequence AR16753 Sequence AR16753 Sequence AR306753 Sequence AR306753 Sequence AR37855 Sequence	A linear PAT 06-SEP-2000  reault, J.P.  E DANIEL (CA); PERREAULT JEAN  ct."	6; Length 37; 0; Indels 0; Gaps 0; BY 37:: GC 37 A linear PAT 06-SEP-2000
52 6 AR368219 57 6 CQ755677 56 6 AR231187 56 6 AR231614 56 6 AR237698 56 6 AR237698 56 6 AR237698 56 6 AR237698 56 6 AR23768 45 6 AR039158 49 6 AR039158 49 6 AR12882 49 6 AR12892 49 6 AR12892 49 6 AR12893 52 6 I41391 58 6 AR1391 50 6 CQ00346 32 6 AR125066	ALIGNMENTS  AX012291 Sequence 53 from Patent W09955856. AX012291.1 GI:9998352 synthetic construct synthetic construct other sequences; artificial sequences.  Ananvoranich, S., Lafontaine, D. and Perre Nucleic acid enzyme for rna cleavage Patent: W0 9955856-A 53 04-NOV-1999; ANANVORANICH SIRINART (CA); LAFONTAINE IPERRE (CA); UNIV SHERBENOKE (CA)  L. 37 / Organism=synthetic construct //mol_type="unassigned RNA" //db_xref="taxon:32630" //noTe="synthetic nucleic acid"	95.7%; Score 35.4; DB 59.5%; Pred. No. 26; Live Lis Mismatches CUGGGGUNNNNNNNGGGAUGES [            ::::::
30 30 229 229 229 229 239 240 250 260 270 270 270 270 270 270 270 27	AX012291 Sequence AX012291 AX012291 Synthetic Synthetic Synthetic Other seq 1 Ananvoran Nucleic Patent: Ananvoran Patent: Pate	7 2 2 1 1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RESULT 1 AX012291 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL SOURCE SOURCE SOURCE AUTHORS TITLE JOURNAL SOURCE	Query Match Best Local Matches 2 Qy 1 Db 1 Db 1  RESULT 2 AX012282 LOCUS LOCUS DEFINITION S ACCESSION A VERSYWORDS SOURCE SOURCE S ORGANISM S

ö

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 47 04-00V-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 59.5%; Pred. No. 23; Matches 22; Conservative 15; Mismatches 0; Indels
                                                                                                                                             6; Length 57;
                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                               Indels
                                                                                                                                                                                                                                      1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCCTT 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGTCCACCTCCTCGCGGTCCGCCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
             1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1..57
/organism="synthetic construct"
/mol type="unassigned RNA"
/db_xref="taxon:32639"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db xref="taxon:32630"
/nofe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
                                                                                                                                             BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           other sequences; artificial sequences.
                                                                                                                                           95.7%; Score 35.4; E
59.5%; Pred. No. 23;
iive 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57 bp
Sequence 48 from Patent W09955856.
AX012286
                                                                                                                                                                                                                                                                                                                                        Sequence 47 from Patent WO9955856.
cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                               AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
                                                                                                                                                         Best Local Similarity 59.54 Matches 22; Conservative
                                                                                                                                               Query Match
                    source
                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                              RESULT 5
AX012285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 45 04-NOV-1999;
ANANVORANICH SITHART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: W0 9955856-A 46 04-NOV-1999;
ANANVORANICH SIRRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 995586-A 44 04-NOV-1999;

ANANVORANICH SIRINATY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 59.5%; Pred. No. 23; Matches 22; Conservative 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                          6; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                      1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / S7
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                             1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                                                                                        95.7%; Score 35.4; DB
59.5%; Pred. No. 23;
iive 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences.
 other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 46 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX012283 57 bp
Sequence 45 from Patent WO9958856.
AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                           Best Local Similarity 59.5%
Matches 22; Conservative
                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                    REFERENCE
                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
AX012283
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012284
                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                        ORIGIN
```

셤

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS TITLE JOURNAL

source

ORIGIN

FEATURES

DEFINITION

LOCUS

RESULT 8 AX012288

ઠે 셤 ACCESSION VERSION

ORGANISM

KEYWORDS SOURCE

REFERENCE

AUTHORS TITLE JOURNAL

PEATURES

ORIGIN

DEFINITION ACCESSION VERSION

AX012287 LOCUS RESULT 7

셤

```
PAT 05-DEC-1998
                                                                                        PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 9955856-A 51 04-00V-1999;

RANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
1. 57

/ organism="synthetic construct"
//mol_type="unassigned RNA"
//db xref="transarigned RNA"
//note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 52 04-0NV-1999;

ANANVORANICH SIRTNART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 59.5%; Pred. No. 23; Matches 22; Conservative 15; Mismatches 0; Indels
                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
1 GGGTCCACCTCCCGGGTCCGAACTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGTCCACCTCCTCGCGGTCCGAGCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGTCCACCTCCTCGCGGTCCGATCTGGGCGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .57
/organism="synthetic construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      other sequences; artificial sequences.
                                                                                                                                                                                                     synthetic construct other sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95.7%; Score 35.4; D
59.5%; Pred. No. 23;
:ive 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR021007
Sequence 40 from patent US 5789245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 52 from Patent WO9955856.
AX012290
                                                                                    Sequence 51 from Patent WO9955856.
                                                                                                                                               AX012289.1 GI:9998350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012290.1 GI:9998351
                                                                                                                                                                                    synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 59.5 Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                             DEFINITION
                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
AR021007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                     RESULT 9
AX012289
LOCUS
                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                        PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                     Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 59.5%; Pred. No. 23; Matches 22; Conservative 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 57;
                                                                                                                                                                                                                        linear
                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                     Length
                                                                                                               1 GGGTCCACCTCCTCGCGGTCCGTCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37
                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                     ö
                     DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. 57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95.7%; Score 35.4; D
59.5%; Pred. No. 23;
iive 15; Mismatches
                   ; Score 35.4; C; Pred. No. 23; 15; Mismatches
                                                                                                                                                                                                                Sequence 49 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX012288 57 bp
Sequence 50 from Patent WO9958856.
AX012288 AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                            AX012287.1 GI:9998348
                   95.74;
                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22; Conservative
                                                     22; Conservative
                   Query Match
Best Local Similarity
Matches 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
Matches 22, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
```

ö

ô

```
PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A. Eukaryotic layered vector initiation systems
Patent: US 5814482-A 80 29-SEP-1998,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 52)
Dubensky T.W. Jr., Polo,J.M., Ibanez,C.E., Chang,S.M.W.,
Jolly,D.J., Driver,D.A. and Belli,B.A.
Alphavirus vector constructs
Patent: US 5843723-A 40 01-DEC-1998;
                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 52;
                                         Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                         Score 30; DB 6; 1
Pred. No. 1.6e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 81.1%; Score 30; DB 6; I Best Local Similarity 56.2%; Pred. No. 1.6e+03; Matches 18; Conservative 13; Mismatches 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81.1%; Score 30; DB 6;
56.2%; Pred. No. 1.6e+03;
iive 13; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                   4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52 bp 1
Sequence 40 from patent US 5843723.
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .52
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                        1. .52
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                         52 bp
Sequence 80 from patent US 5814482.
AR043462
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: March 15, 2005, 18:04:58 Job time: 729.614 Becs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                      AR043462.1 GI:5964470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:5990028
                                           81.1%;
56.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 56.2%
Matches 18; Conservative
                                                                        Conservative
                                                                                                                                                                                                                                                                                                   Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
Unclassified.
                                                      Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR062337.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                    Unknown.
                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                             RESULT 14
AR043462
                                                                        Matches
                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 05-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 29-SEP-1999
                                                                                      1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
And Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 40 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 52)
Dubansky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
and Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 80 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 5814482-A 40 29-SEP-1998;
                                                                                                                                                                                                                                                                                    ò.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                          Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                      81.1%; Score 30; DB 6; I
56.2%; Pred. No. 1.6e+03;
iive 13; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 30; DB 6; 1
Pred. No. 1.6e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                   1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                     AR021047 52 bp I
Seguence 80 from patent US 5789245.
AR021047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR043422 52 bp 1
Sequence 40 from patent US 5814482.
AR043422
                                                                                                                                                                                               /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR021047.1 GI:3975662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR043422.1 GI:5964430
               GI:3975622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 56.2%;
                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 56.2
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unclassified.
                                                           Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
Unclassified.
 AR021007
AR021007.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
ACCESSION
VERSION
KEYWORDS
                                                            ORGANISM
                                                                                                                                                   JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
AR043422
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                        AR021047
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                          REFERENCE
                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                          셤
```

ö

THIS PAGE BLANK (USPTU)

```
March 15, 2005, 11:20:37; Search time 205.285 Seconds (without alignments) 1066.957 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                       4316768
                                                                                                                                                                                                                        1 ggguccaccuccucgcggunnnnnngggcaugcsby 37
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                4390206 segs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                           IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            geneseqn2003cs:*
geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N. Geneseq_16Dec04:*

1. geneseqn1990s:*

2. geneseqn2000s:*

4. geneseqn2001as:*

5. geneseqn2001bs:*

6. geneseqn2001bs:*

7. geneseqn2002bs:*

9. geneseqn2003bs:*
                                                                                                                                                                              US-09-699-667E-65
37
                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                  Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                             Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Aaz57639 Nucleotid	Aaz57636 Trans-act	. Aaz57638 Trans-act	Aaz57637 Trans-act	Adr47040 Dengue vi	Adt48965 PCR prime	Aag86173 Primer HD	Aaq86204 Sindbis/H	Aat31151 HDV rever	Aat30817 HDV riboz	Aav42394 Nested PC	Aav42426 Forward P	Aav60154 Nested PC	Aav60185 Reverse P	Aav70746 Reverse P	Aav70714 Nested pr	Aaz92930 Hepatitis	Aaz92970 Hepatitis	Aaz92843 Hepatitis	Aaz92803 Hepatitis
SUMMARIES	ΩI	AAZ57639	AAZ57636	AAZ57638	AAZ57637	3 ADR47040	3 ADT48965	AAQ86173	AAQ86204	AAT31151	AAT30817	AAV42394	AAV42426	AAV60154	AAV60185	AAV70746	AAV70714	AAZ92930	AAZ92970	AAZ92843	AAZ92803
	* Query Match Length DB	37 3	57 3	57 3	57 3	48 13	48 13	51 2	52 2	52 2	52 2	52 2	52 2	52 2	52 2	52 2	52 2	52 3	52 3	52 3	52 3
	% Query Match	95.7	95.7	95.7	95.7	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1
	Score	35.4	35.4	35.4	35.4	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	Result No.	1	7	e	4	ß	9	7	80	σı	10	11	12	13	14	15	16	17	18	19	20

i

Aal38850 Alphaviru Abk46276 HVV antig Abk46216 Hepatitis Add10383 Hepatitis Add10423 Hepatitis Add13942 Eukaryoti Add10551 Hepatitis Aax59264 Nested pr Aax59264 Nested pr Abx8110551 Hepatitis Aax6145 Sindbis v Aax78132 Hepatitis Aax61451 Hepatitis Aax61451 Hepatitis Aax61451 Hepatitis Aax61451 Hepatitis Aax61451 Human Hep Aax70071 Human Hep Aax784668 Substrate Aqb69915 Laczn1812 Aat28753 Primer us Aat28159 Primer #3	S				уте RzA fragment.	; RzA fragment;		ment of bimolecular ribozyme" anded region with bases 20-16 of		1.1"	anded region with bases 11-6 of ment of bimolecular ribozyme" anded region with bases 8-1 of					
AAL38850 AAL38810 ABK46276 ABK46276 ADC130383 AD130423 AD013942 AD013942 ADN10551 AAX58506 ABX81463 AAX78132 AAX61451 AAX0071 AAX0071 AAX00734 AAV3887 AAV38887	ALIGNMENTS	ВР.			bimolecular ribozyme	RNA cleavage;		Location/Qualifiers 16 /*tag= a /bound_moiety= "RzB fragment of note= "Forms double-stranded note= "Forms double-stranded"	049.	y= "Ribozyme	. "Forms double-stranded roce AAZ57641"  d d d moiety= "RzB fragment of "Forms double-stranded roce AAZ57640"			•	•	
5 2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		37 B		<del>\</del>	oimol	viral		on/Qual: a moiety: "Forms		5 c _moiety=	"Forms of AAZ57 d moiety= "Forms of AAZ57 of AAZ			16800	30203	
\ R		; RNA;		st entry)	of	ribozyme, vi isease, ss.		Location 16 /*tag= /bound_n/note=	sequence		/note= "Forms d sequence AAZ576 3037 /*tag= d /bound_moiety= /note= "Forms d sequence AAZ576	,		99WO-CA000391	98CA-02230203	SHERBROOKE.
4444700000000000		standard;		(first	вефиепсе	bozy		31/44	8	. %	7 8 8 7 7 7 8			166	980	HERE
8811 8811 9811 7333 7333 758 765 765 765 765 765 765 765 765 765 765		tand		0	8eq			g.		5u	5 u	A2.	9.	. 6	.,	UNIV S
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		T 1 639 AAZ57639 B	AAZ57639;	-APR-200	leotide	Bimolecular inherited d	Synthetic.	c_binding	stem_loop	sc_binding	c_binding	WO9955856-A2	04-NOV-1999	9-APR-1999	9-APR-1998	(UYSH ) UN
27 27 27 27 27 27 27 27 27 27 27 27 27 2		RESULT 1 AAZ57639 ID AAZ	AAZ	-50	Nucl	Bim	Syn	Key misc	ste	mis	misc	W09	04-	29-	29-	<u>(17</u>
. 0000		RESULT AAZ576 ID A	XX.	ž E	XE:	<b>323</b>	X S	X E E E E E E	111	1111		XZ	X E	X ELS	Z Z Z	Z K

```
(UYSH ) UNIV SHERBROOKE
                                      WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis D virus
                    Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-NOV-1999,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57638;
                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                   AAZ57638
g
                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                          ö
                                                                                                This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to an ucleid acid enzyme (e.g. deleaR2P1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate sequence. The enzyme of the invention is used to cleave a substrate with the enzyme. The enzyme to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                              Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20. ..25
/*tag= c
7.tag= c
30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                          Gaps
                                                 New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.1; ss.
                                                                                                                                                                                                                                                                 95.7%; Score 35.4; DB 3; Length 37; 73.0%; Pred. No. 0.39; ive 10; Mismatches 0; Indels
                                                                                                                                                                                                                                                 Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUCCGACCUGGGCCAUGCGCC 37
          Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                 Example 5; Fig 4; 52pp; English
          Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                   AAZ57636 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ъ
                                                                                                                                                                                                                                                                                         27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= c
52..57
/*tag= 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *tag=
                               WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                               Best Local Similarity
          Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Trans-acting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                           05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stem_loop
                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                              셤
```

```
ö
                                                                                                                                                                                                                                                                  This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7. .19
/*tag= b
20. .20. /*tag= c
/bound_moiety= "SP1.1 gubstrate bases (AAZ57641) 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gape
                                                                                                                     enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 95.7%; Score 35.4; DB 3; Length Local Similarity 73.0%; Pred. No. 0.42; Length 10; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGGGGUCCGACCUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
Lafontaine D;
                                                                                                                     New construction of nucleic acid enzyme diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                     Example 1; Fig 1A; 52pp; English.
   Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57638 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52. .57
/*tag= (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag=
'no'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note=
```

99WO-CA000391.

```
29-APR-1999;
                   29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-AUG-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADR47040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SHAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BEIJ-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TENG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
ADR47040
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                 This is the nucleotide sequence of a trans-acting antigenomic delta ribosyme of the invention. This ribosyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the base pairs to 6 nucleotides 3'-th chaining portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleave viral RNA or RNA causing for example an inherited disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       '*tag= a
note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20. ..25
/*teg= c
Yend moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                   diagnostic
                                                                                New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                  enzymes also have other therapeutīc, biotechnological and diag
applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.2; ss.
                                                                                                                                                                                                                                                                                                                       DB 3; Length 57;
                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                  Seguence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                               GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCCUCGCGGUCCGACCUGGCCAUGCCUU 37
                                                                                                                                                                                                                                                                                                                      95.7%; Score 35.4; DB 73.0%; Pred. No. 0.42;
                                         Lafontaine D;
                                                                                                                                                                                                                                                                                                                                           10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                 Example 1; Fig 2; 52pp; English.
                                         Perreault J, Ananvoranich S,
98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57637 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= d
52. .57
/*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Д
                                                                                                                                                                                                                                                                                                                  Ouery Match
Best Local Similarity 73.0°
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                   (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                             WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
misc_binding
29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
ઠે
                                                                                                                                                                                                                                                                                                                                                                                  셤
```

```
This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme cleaves substrate SP1.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site of the substrate of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, blottechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the clearary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytostatic; virucide; dengue virus; recombinant replicon; deletion; 4 protein; C protein; NS1 protein signal; vaccine; cervical cancer; al disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                 New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 95.7%; Score 35.4; DB 3; Length 57; Best Local Similarity 73.0%; Pred. No. 0.42; Matches 27; Conservative 10; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seguence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGUCCACCUCCUCGCGGUCCCAGCUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TENGEN BIOMEDICAL CO.
BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                            Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHANGHAI TENGEN BIOMEDICAL CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page; 52pp; English.
                                                                                                                                                            Perreault J, Ananvoranich S,
98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JAN-2004; 2004WO-CN000088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JAN-2003; 2003CN-00115272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADR47040 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                              (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human papillomavirus
                                                                                                                                                                                                                              WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004072274-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .8-NOV-2004
```

```
Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                            Example 4; SEQ ID NO 37; 38pp; Chinese
                                                                                                                                                                                                                                                                                                                  PCR primer 5' HDVr, seq id 29
                  Virus-like particle vaccines
                                                                                                                                                                                                                                                                                                                                                                                          19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                        20-MAR-2003; 2003CN-00115912.
                                                                                                                                                                                                                                                                           ADT48965 standard; DNA; 48
                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                          Best Local Similarity 56.2
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-699719/68.
     WPI; 2004-625870/60
                                                                                                                                                                                                                                                                                                                                      PCR; primer; 88.
                                                                                                                                                                                                                                                                                                                                                                WO2004082712-A1.
                                                                                                                                                                                                                                                                                                    16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                             30-SEP-2004.
                                                                                                                                                                                                                                                                                        ADT48965;
                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                   Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Pang X;
                               like
                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                         셤
```

```
The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The amplified DNA sequences were used in the construction of a cukaryotic layered vector initiation system (ELVIS) derived from Sindbis. ELVIS's comprise a 5 sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevenced, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral
                                                               The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its esquence for virus is useful in producing the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuated encephalitis B virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                                                                                                                                                                                                                                                                                                                                            81.1%; Score 30; DB 13; Length 48; 56.2%; Pred. No. 32; ive 13; Mismatches 1; Indel8
                                                                                                                                                                                                                                                                                                                                                                               Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                     Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chang SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 2; Page 68; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93US-00122791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94US-00198450
                                                                                                                                                                                                                                                                                                                             example from the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 56.2
nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ86173;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAQ86173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                           sequence for preM protein of dengue virus and also includes elements of e.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of NSI protein signal; coding regions of all non-extructural proteins. The Obtained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can efficiently express antigen in infected calls, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a genecapressing system using of the full-length dengue virus cDNA clone (PRS/FLD2). The recombinant virus vectors were transfected into baby hamster kidney (BHK) cells to enable the screening of BHK-21 Tet-off cell lines. This sequence corresponds to an oligonucleotide used in the recombinant replicon of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                    s-like particle vaccines containing dengue virus recombinant replicon
ore for carrier, applicable in preventives or/and remedies for tumors
cervical cancer and viral diseases.
                                                                                                                                                                                                                              dengue virus recombinant replicon has a deletion of the complete coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Virucide, Japanese encephalitis B virus; bivalent vaccine; hepatitis B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.1%; Score 30; DB 13; Length 48; 56.2%; Pred. No. 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17 TCCACCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
(TENG-) TENGEN BIOMEDICAL CO.
```

Polo JM;

Driver DA,

ö

Gaps

```
Page
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequences given in AAQ86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are eukaryotic layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS's comprises a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-WAR-2003 to correct PN field.)
junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transcription initiation; non-structural protein; subsenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polo JM;
                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jolly DJ, Driver DA,
                                                                                                                     81.1%; Score 30; DB 2; Length 51; 56.2%; Pred. No. 33;
                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                     Sequence 51 BP; 9 A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                          1 TCCACCTCCTGGGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                       13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chang SM,
                                                                                                                                                                                                                                                                                                              В.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93US-00122791.
                                                                                                                                                                                                                                                                                                              25
                                                                                                          Query Match
Best Local Similarity 56.29
                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ibanez CE,
                                                                                                                                                                                                                                                                                                            AAQ86204 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W09507994-A2
                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                              23-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                              AAQ86204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dubensky
                                                                                                                                                                                                                                                                              RESULT 8
                                                                                                                                                                                                                                                                                                AAQ86204
 8X8888
                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                       ద
```

```
primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 839-887. It was used with reverse primer HDV49-XC (AAT30850) for the PCR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SIN276-SPE (AAT31153), is used to amplify a fragment conty. Sindbis 5'-end sequences fused to HDV sequences. Overlapping synthesis is used in a second round of PCR using primers HDV49-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction region, designated pd5'26s. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jolly DJ, Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                          Alphavirus; Sindbis virus; vector; gene therapy; vaccine; polymerase chain reaction; PCR; primer; hepatitis delta virus; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chang SMW,
              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13; Mismatches
4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 7; Page 120; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky TW, Polo JM, Ibanez CE,
Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                          95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                          94US-00348472.
                                                                                                                                                                                                                                                                                                                                                                             95WO-US015490
                                                                                                                                                                                              HDV reverse primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CHIR ) CHIRON VIAGENE INC.
                                                                                                      AAT31151 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT30817 standard; DNA; 52
                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 56.2
nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1996-277785/28.
                                                                                                                                                                                                                                                         ribozyme; ss.
                                                                                                                                                                                                                                                                                                                 WO9617072-A2
                                                                                                                                                                                                                                                                                                                                                                             30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                         30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                        LS-MAR-1995;
                                                                                                                                                               12-SEP-1996
                                                                                                                                                                                                                                                                                                                                               06-JUN-1996
                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                 AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT30817;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAT30817
                                                                                          AAT3115:
                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e x x x
ò
```

ö

ö

Gaps

ö

Query Match 81.1%; Score 30; DB 2; Length 52; Best Local Similarity 56.2%; Pred. No. 33; Matches 18; Conservative 13; Mismatches 1; Indels

Polo JM;

```
PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene, where the promoter directs the the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA alpha: virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                  DNA alpha:virus structural protein expression cassettes - for producing recombinant alpha:virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                               Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                               Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81.1%; Score 30; 56.2%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jolly DJ,
                                                                                                                                               Jolly DJ,
                                                                                                                                                                                                                                                                          Example 3; Col 69; 140pp; English.
93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-00741881.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95US-00404796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Forward PCR primer HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42426 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 56.2
les 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chang SMW, Ibanez CE,
                                                                                                                                               Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-446089/38
                                                                                                            (CHIR ) CHIRON CORP.
                                                                                                                                                                                 WPI; 1998-446089/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-0CT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-SEP-1993;
18-FEB-1994;
                                                                        15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L5-MAR-1995;
                    18-FEB-1994;
30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US5789245-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-AUG-1998
                                                       20-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV42426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer SHDVIF (AAM10816) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDVI7-68 (AAM10817) and reverse primer SHDV84R (AAM10818) to generate an HDV ribozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         Driver DA;
                                                                            Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer; polymerase chain reaction; PCR; ELVIS; ribozyme; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                       Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
81.1%; Score 30; DB 2; Length 52;
Best Local Similarity 56.2%; Pred. No. 33;
Matches 18; Conservative 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                         Chang SMW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UCCACCUCCUCGCGGUNNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nested PCR primer HDV17-68 of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                         Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 3; Page 85; 256pp; English
                                                                                                                                                                                                                                                                                             94US-00348472.
95US-00376184.
95US-00405827.
                                          HDV ribozyme primer HDV17-68
                                                                                                                                                                                                                                                          95WO-US015490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-00741881
                                                                                                                                                                                                                                                                                                                                                                      (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-OCT-1998 (first entry)
       12-SEP-1996 (first entry)
                                                                                                               hepatitis delta virus; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV42394 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                         Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1996-277785/28
                                                                                                                                                                                                                                                                                                                                                                                                       Dubensky TW,
Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-OCT-1996;
                                                                                                                                                                                      WO9617072-A2
                                                                                                                                                                                                                                                             30-NOV-1995;
                                                                                                                                                                                                                                                                                                 30-NOV-1994;
                                                                                                                                                                                                                                                                                                                18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                          06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US5789245-A
                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV42394;
```

RESULT 11 AAV42394

ઠે 원 ö

Gaps

ö

Polo JM;

?!0

Gaps ö

```
The specifiaction describes an eukaryotic layered vector initiation system. based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5 of viral cDNA which initiates, in a susceptible target cell, 5 to 3' synthesis of RNA from the viral cDNA. The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that eliminates an immune response within an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I-restricted or an HLA class II-restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCR primers AAV60184-85 are used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral cDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral cDNA.
                                                                                                                                                                                                                                                                                                 81.1%; Score 30; DB 2; Length 52; S6.2%; Pred. No. 33; 1; Indels iive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCACCTCCTCGGGTCCGACCTGGGCATCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dubensky TW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 5, Col 108; 144pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93US-00122791.
94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reverse PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV60185 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 56.23
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sindbis, PCR primer, ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DUBENSKY T W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POLO J M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-0CT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JS5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-SEP-1993,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV60185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOLL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POLO/)
(DUBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Driver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV60185
        8888888888888888
                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                         PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression casette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotic layered vector initiation system; stimulate; immune response; Sindbis; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                          81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33; 1; Indels ive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                     Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jolly DJ, Dubensky TW;
                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCACCTCCTGGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 3; Col 71-72; 144pp; English.
                                           Example 7; Col 103; 140pp; English.
    recombinant alpha: virus particles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV60154 standard; DNA; 52 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-00122791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 56.2'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DUBENSKY T W.
JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POLO J M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-NOV-1994;
18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-FEB-1994;
14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV60154;
```

RESULT 13

요 8

(DUBE/) (JOLL/) (DRIV/) POLO/)

AAV60154

XX AAC

AAV6

XX AAC

AAV6

DOT 25-14

DOT 25-14

Eukk

XX BENK

XX XX BENK

XX

```
ö
The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an infection in vivo, especially where the immune response to an entided in the class I restricted or an HIA class I restricted or an HIA class II-restricted immune response.
                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                            Reverse PCR primer HDV17-68 used to amplify Hepatitis delta virus.
                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                  Alphavirus vector construct; gene therapy; PCR primer; ss
                                                                                                               81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33;
                                                                                                                                   Indels
                                                                                            Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                   1;
                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                   13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                           93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                          96US-00739167
                                                                                                                                                                                                                          52
                                                                                                                                                                                                                                                                (revised)
(first entry)
                                                                                                                                   18; Conservative
                                                                                                                                                                                                                          AAV70746 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON CORP.
                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                     Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                         30-OCT-1996;
                                                                                                                                                                                                                                                                20-MAR-2003
02-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                      18-FEB-1994;
30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                   US5843723-A
                                                                                                                                                                                                                                                                                                                                                                                      01-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                             15-SEP-1993
                                                                                                                                                                                                                                            AAV70746;
                                                                                                                                                                                                        RESULT 15
                                                                                                                                                                                                              g
                                                                                                                                                       ઠે
```

PCR primers AAV70745-46 are used to amplify part of the hepatitis delta virus (HDV) genome. The amplified product is used in the production of the alphavirus vector constructs of the invention. These constructs comprise a promoter 5' of viral cDNA which initiates the synthesis of RNA from the viral cDNA by in vitro transcription, followed by a 5' sequence sequence encoding alphavirus nonstructural proteins, a viral junction region which has been inactivated such that viral transcription of a subgenomic fragment is prevented, an internal ribosome entry site or a subgenomic fragment is prevented, an internal ribosome entry site or a sequence which promotes ribosome read through between adjacent reading frames, and an alphavirus RNA polymerase recognition sequence. The recombinant alphavirus vectors can be used for gene therapy. (Updated on 20-MAR-2003 to correct PR field.)

Alphavirus vectors constructs containing a 5' promoter of viral cDNA by in vitro transcription - used in gene therapy.

Example 7; Col 103; 140pp; English.

Driver DA;

Belli BA, Ibanez CE,

Dubensky TW,

Jolly DJ,

Chang SMW, Polo JM;

WPI; 1999-044581/04.

```
Gaps
                                                                         ö
                                         DB 2; Length 52;
                                                                        1; Indels
              Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                        81.1%; Score 30; DB
56.2%; Pred. No. 33;
ive 13; Mismatches
                                                                                                                                                                                 Search completed: March 15, 2005, 16:13:06 Job time: 206.285 secs
                                    Query Match
Best Local Similarity 56.2<sup>3</sup>
Matches 18; Conservative
X S
                                                                                                         8
                                                                                                                                   ద
```

Sequence Sequence Sequence

38, Appl 57, Appl 19, Appl 19, Appl 40, Appl 40, Appl 9, Appl 7, Appl 7, Appl 7, Appl 32, Appl 8, Appl 8, Appl 8, Appl 8, Appl

Sequence 38, Sequence 1875 Sequence 1975 Sequence 10, Sequence 10, Sequence 10, Sequence 10, Sequence 31, Sequence 118, Sequence 8, Al Sequen

Sequence 3,

US-08-399-696-51 US-08-244-626-18 US-09-510-925A-8

US-09-848-464-8 US-08-978-806-3

ALIGNMENTS

```
US-09-216-584-38
US-09-812-186-5
US-09-812-186-5
US-08-238-63A-19
US-08-646-655-40
PCT-US96-06053-40
US-08-894-72-10
US-08-898-72-10
US-08-888-3558-7
US-08-888-366-32
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
773330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77330
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
77300
773000
773000
773000
773000
773000
773000
773000
773000
773000
77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
STREET: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY:
US-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-741-881-40
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1875, Ap
                                                                                                                     March 15, 2005, 15:26:58 ; Search time 61.5044 Seconds
   (without alignments)
   984.356 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                            1250976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued Patents NA:*

(cgn2 6/ptodata//ina/5A COMB.seq:*
(cgn2 6/ptodata/1/ina/5B COMB.seq:*
(cgn2 6/ptodata/1/ina/6A COMB.seq:*
(cgn2 6/ptodata/1/ina/6B COMB.seq:*
(cgn2 6/ptodata/1/ina/R CTUS COMB.seq:*
(cgn2 6/ptodata/1/ina/R CTUS COMB.seq:*
                                                                                                                                                                                                                                   1 ggguccaccuccucgcggunnnnnngggcaugcsby 37
                  GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-985-162-1875
US-08-998-099-373
US-09-112-086B-7
US-08-975-238-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-741-881-40

US-08-739-181-80

US-08-739-188-40

US-08-739-186-40

US-08-739-167-40

US-08-739-167-40

US-08-91-869-40

US-08-91-869-40

US-08-91-869-40

US-09-350-399-40

US-09-350-399-40

US-09-350-399-40

US-09-318-139-40

US-09-318-139-139

US-09-415-784-39

US-09-415-785A-39

US-09-415-785A-39

US-09-415-900-39

US-09-415-900-39
                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                         1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                       nucleic search, using sw model
                                                                                                                                                                                                                                                                    IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                      US-09-699-667E-65
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
Sequence 40, Application US/08741881
Patent No. 5789245
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 81.1%; Score 30; DB 1; Length 52; Best Local Similarity 56.2%; Pred. No. 8.2; Matches 18; Conservative 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          SIREET: e310 COLUMDIA CENCET, /UL FILLIN AVENUE
CITY: seatule
STATE: Washington
COUNTRY: US
ZIP: 9814-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIDE
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMESTERS DAVIG D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (206) 622-4900
TELEFAX: (206) 622-6031
INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS:
LENGTH: 52 base paire
TYPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                 E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
```

```
STATE: Washingtor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                               Sequence 80, Application US/08741881

Petent No. 578245

GENERAL INFORMATION:

APPLICANT: Dubensky Jr, Thomas W

APPLICANT: Dubensky Jr, Thomas W

APPLICANT: Danez, Carlos E.

APPLICANT: Driver, David A.

APPLICANT: Driver, David A.

APPLICANT: Belli, Barbara A.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS

NUMBER OF SEQUENCES: 128

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40, Application US/08739158
Patent No. 5814482
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Douglas J.
APPLICANT: Douglas J.
APPLICANT: Driver, David A.
TITLE OF INVENTION: ENGRAYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81.1%; Score 30; DB 1; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 6300
CITY: Seattle
CITY: Seattle
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: 30-OCT-1996
FILING DATE: 30-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 30-OCT-1996

FILING DATE: 30-OCT-1996

ATTORNEY/AGENT INFORMATION:
NAME: MCMAGTER, David D.
REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007

FELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900

INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPER: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                     3: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 56.24
Matches 18, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: linear
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                       RESULT 2
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
COUNTRY 1819/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/18 1919/1
```

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: BURARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EUXARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE.

CLASSIFICATION: 435
ATTORNAGENT INFORMATION:
NAME: MCMASTERS. David D.
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REFERENCE/CONCIN INFORMATION:
TELECOMONIOTATION 100: 622-4900
TELECOMONIOTATION FOR SEQ ID NO: 80:
SEQUENCE CHARATTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 56.2%; Pred. No. 8.2;
Matches 18; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Thanez, Carlos E.
APPLICANT: Chang, Srephen M.W.
APPLICANT: Olly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYE
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
    Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40, Application US/08404796 Patent No. 6015686
                                                                                                                                                                                                                               SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PC compatible
                                                                                                                                                                                                                                           STREET: 6300 Columbia
CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 981.04-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 6300 Colum
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:

APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dolo, John M.

APPLICANT: Ibanez, Carlos E.

APPLICANT: Chang, Stephen M.W.

APPLICANT: Jolly, Douglas J.

APPLICANT: Jolly, Dayid A.

APPLICANT: Belli, Barbara A.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                            .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ·
0
                                                                                                              81.1%; Score 30; DB 1; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 52;
                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: MCMABLERS, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C7 / 1146.008
TELECOMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.1%; Score 30; DB 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                         Sequence 40, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
US-08-739-167-80
; Sequence 80, Application US/08739167
; Patent No. 5843723
; GENERAL INFORMATION:
                                                                                                                                                          18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 56.23
Matches 18; Conservative
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Washington
                                                                                                                                   Best Local Similarity
                                           ; TOPOLOGY: linear
US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TOPOLOGY:
US-08-739-167-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                              Query Match
                                                                                                                                                          Matches
```

g

```
US-08-931-869-80
; Sequence 80, Application US/08931869
; Patent No. 6015694
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 Dase pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 56.24
The second of the 
                                                                                                             Local Similarity 56.2
hes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: SEED and
STREET: 6300 Columb
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-931-869-40
US-08-404-796-80
                                                                                 Query Match
                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dolo, John M.
APPLICANT: Lancz, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Bell, Bavid A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS ON THE COMPARENCES: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: Washington
COUNTRY: Washington
COUNTRY: Washington
COMPUTER READAble FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 15-WAR-1995
CLASSIFICATION: 435
ATTORNEY AGENT INPORMATION:
NAME: MCMASTERE DAVIG D:
REGISTRATION NUMBER: 33,963
REPERENCE/DOCKET NUMBER: 930049,423C5 / 1146.006
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION SEQUENCE
TELECOMMUNICATION NOS BEQ DI NO: 80:
SEQUENCE CHARACTERISTICS:
TENERAL STATES
TENERAL SEQUENCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                            SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMASTERS, David D.
REGISTRATION NUMBER: 33,963
REPERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 622-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.1%; Score 30; DB 56.2%; Pred. No. 8.2; tive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 80, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 56.24
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and E
STREET: 6300 Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length 52;
81.1%; Score 30; DB 3; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Elem PC compatible
COMPUTER: Elem PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR:1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMASIERS: DAVIA D.
REGISTRATION NUMBER: 33,963
REFERENCE/COMMUNICATION INFORMATION:
NAME: MCMASIERS: 33,963
REFERENCE/COMPUTION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF 0.00.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        930049.423C5 / 1146.006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Mismatches
                                                     13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81.1%; Score 30;
56.2%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Orly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: Belli, Barbara A.
CURRESPONDENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                              Sequence 40, Application US/08931869
Patent No. 6015694
```

us-09-699-667e-65.siz.rni

```
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTON: EURARYOFIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
               SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-701-1999
CLASSIFICATION: Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: MCMASICERS, 33,963
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: US

ZIP: 98104-7092

ZIP: 98104-7092

COMPUTER: US

COMPUTER: Floppy disk

COMPUTER: TEM PC compatible

COMPUTER: PARTEN: PC-DOS/NS-DOS

SOFTWARE: PARTENTIN Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/350,399

FILING DATE: BO-Jul-1999

CLASSIFICATION: «Juknown»

ATTORNEY/AGENT INFORMATION:

NAME: MCHASTERENCE, David D.

REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 30; DB
Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 80, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81.1%;
56.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Dubensky Jr,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 56.29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (206)
                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EMERYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                       TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
CUMPRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DAIE: 16-SEP-199/
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 08 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCAMEGERS, DAVIG D.
REGISTRATION NUMBER: 33-963
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-6031
INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
                                                                                                                                                                                                             3: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                    Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 56.2
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and |
STREET: 6300 Columbia
                                                                                                                                                                                                                                                                                              COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
                                    APPLICANT: IDanez, Ca
APPLICANT: Chang, Str
APPLICANT: Jolly, Do
APPLICANT: Driver, Di
APPLICANT: Belli, Bal
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                   Washington
                                                                                                                                                                                                                                                        CITY: Seattle
STATE: Washing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-931-869-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

ö

Gaps ö

ò ద

```
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81.1%; Score 30; DB 3; Length 52; 56.2%; Pred. No. 8.2; tive 13; Mismatches 1; Indels
                               Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
COMPUTER: PJO509V disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILING DATE: 22-Jan-1999
CLASSIPICATION: <university controlly con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATORNAT/AGENT INFORMATION:

NAME: Cullman, Louis C.

REGISTRATION UNBER: 39,645

REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020

TELECOMMUNICATION INFORMATION:

TELEFAX: (949) 823.6000

TELEFAX: (949) 823.6100

INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 39, Application US/09415784 Patent No. 6391632 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Seattle
STATE: Washington
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 18; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                          Gaps
                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSIEM: FL-DOS/MS-LOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-43m-1999
CLASSIFICATION: CURKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: Culhman, Louis C.
REFERENTE/POCKET NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6100
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
81.1%; Score 30; DB 3; Length 52;
Best Local Similarity 56.2%; Pred. No. 8.2;
Matches 18; Conservative 13; Mismatches 1; Indels
       Length 52;
                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
       DB 3;
                                                                                                                                                                                1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
81.1%; Score 30; DB : 56.2%; Pred. No. 8.2; iive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 80, Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
Ibanez, Carlos E.
                                                                                                                                                                                                                                                                                                     RESULT 13
US-09-236-140A-40
; Sequence 40, Application US/09236140A
; Patent No. 6376236
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 92660
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: CALIFORNIA COUNTRY: US
                                                                          18; Conservative
   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-09-236-140A-80
                                                                          Matches
```

ઠે 셤

us-09-699-667e-65.siz.rni

Search completed: March 15, 2005, 20:44:24 Job time : 61.5044 sec8

THIS PAGE BLANK (USPTO)

```
March 15, 2005, 15:26:58 ; Search time 61.5044 Seconds
   (without alignments)
   984.356 Million cell updates/sec
                                                                                                                                                                                                                                                  1 ggguccaccuccucgcggunnnnnugggcaugcgcc 37
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                           OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                       IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                US-09-699-667E-63
                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                  Sequence:
                                                                                                                       Run on:
```

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Minimum DB seq length: 0 Maximum DB seq length: 60

Total number of hits satisfying chosen parameters:

1202784 segs, 818138359 residues

Searched:

1250976

Issued\_Patents\_NA:\*
.: /cgn2\_6/ptodata/1/ina/5A\_COMB.seq:\*
.: /cgn2\_6/ptodata/1/ina/6A\_COMB.seq:\*
.: /cgn2\_6/ptodata/1/ina/6A\_COMB.seq:\*
.: /cgn2\_6/ptodata/1/ina/PcTUS\_COMB.seq:\*
.: /cgn2\_6/ptodata/1/ina/PcTUS\_COMB.seq:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

			Appl	Appl	Appl	Appl	Appl	App1	App1	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appli	Appli	Appli	Appli
		<u>.</u>	40,	80,	40,	80,	40,	80,	40,	80,	40,	80,	40,	80,	40,	80,	39,	39,	39,	39,	39,	39,	19,	40,	40,		'n	2,	,
		tio	e G	e C	9	ö	ë	ö				ö	ë	g	g	e O	Ge	Ge	g	ë	Ge	g	e	ë	ë	Ge	ë	g	e
		rip	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence
		Description	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Seq	Sed	Sed	Sed	Sed	Seg
			-40	-80	40	80	40	-80	40	80	40	89	40	80	-40	-80	39	-39	39	39	39	39	-19	40	-40	-1	S.	2	9
		į	-881-	-881-	-158-4	158-8	08-739-167-4	-167-	-796-4	-196-8	08-931-869-4	-69	9-350-399-4	09-320-339-8	09-236-140A-40	09-236-140A-80	09-415-784-39	09-415-785A-39	-69	-89	09-415-900-3	162-	63A	-369	5053	155B	182-	-419-125-	-906-
		į	11-8	11-ε	39-1	39-1	39-1	39-1	7-70	7-70	31-6	31-8	50-3	50-3	36-1	36-1	15-1	15-7	14-4	15-8	15-9	77-3	38-9	7€-6	9-0	35-3	32-6	19-1	758-3
			08-741	08-741	08-739	08-739	8-7	08-739	08-404	08-404	8-9	8-9	9-3	9-3	9-2	9-2	9-4.	9-4	8-9	9-4	9-43	9-5	8-2	9-8	ns9	8-48	9-6	9-4	8-7
		1 1	US-0	US-0	<b>US-0</b>	US-0	US-0	US-0	0-50	0.50	0-50	0	0	US-0	US-0	us-o	US-0	0-50	US-08-944-465-3	US-09-415-868-3	US-0	JS-09-507-362-3	JS-08-238-963A-1	JS-08-646-695-40	PCT-US96-06053	JS-08-485-355B	JS-08-632-882-	60-Sn	3S-08
		DB	-	_	-	- -	~	~	რ	М	m	ო	m	m	m	m	m	m	m	m	- ۳	4	-	ო	S	m	~	4	-
		Match Length	52	25	25	25	25	25				52		25	52		26			26			25		28	39	45	45	49
	ቷ	નું : નું :	7	7.	~	7	~	~	7	~	~	~	۲.	7	~	7	4.	4.	4.	4.	4.	4.	σ.	7	~	'n	'n	'n	'n
dР	Query	Mat	82	82	82	82	82.	82	82	82	82	82	82	82	82.2	82	78	78.4	78	78.4	78.4	78.4	64.9	62	62	9	59	29	59
		re	4.	4.	₹.	4.	4.	4.	4.	4	4.	4.	4.	4.	4.	4.	53	59	29	53	53	29	24	23	23	4.	22	22	22
		Score	30	30	30	30	30	30	30	30	30	30	30	30	30	30										22			
	ılt	No.	-	~	٣	4	ហ	ø	7	œ	σ	9	11	12	13	14	15	16	11	18	19	20	21	22	23	24	25	56	27
	Result	¬ ;																						υ	υ				

Sequence 1875, App Sequence 373, App Sequence 5, Appli Sequence 1234, App Sequence 1234, App Sequence 9, Appli Sequence 1875, App Patent No. 5225337 Patent No. 5225337 Patent No. 5225337 Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 59, Appli
US-08-985-162-1875 US-08-998-099-373 US-08-9112-0868-7 US-08-975-238-5 US-09-094-381C-18 US-09-679-645-1234 US-09-216-584-38 US-09-216-584-38 US-09-216-584-38 US-09-216-584-38 US-09-216-584-38 US-09-216-584-38 US-09-216-584-38 US-09-317-3 US-09-317-3 US-08-894-727-10 US-08-894-727-10 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32 US-08-898-366-32
<b>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</b>
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 6
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2002 2002 2002 2002 2002 2004 2004 2004
22666666666666666666666666666666666666
000 0

## ALIGNMENTS

```
Gaps
                                                                                       APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 82.2%; Score 30.4; DB 1; Length 52; Best Local Similarity 59.4%; Pred. No. 4.2; Matches 19; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
                                                                                                                                                                                                                                                                                                                                     E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                    Sequence 40, Application US/08741881
Patent No. 5789245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INPORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                     CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
US-08-741-881-40
US-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                              STREET:
```

4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35

ö

ð

```
Washingtor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                         Sequence 80, Application US/08741881

Patent No. 5789245

GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Tolo, John M.
APPLICANT: Danie, Stephen M. W.
APPLICANT: John, Douglas J.
APPLICANT: John, Barbara A.
TILLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 40, Application US/08739158

Patent No. 5814482

GENERAL INCRAMITION:
APPLICANT: Debensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Polo, John M.
APPLICANT: Delo, John M.
APPLICANT: John 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 30-OCT-1996
CLASSIFTCATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMASTERE: Javid D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007
TELECOMPUNICATION INFORMATION:
TELEFAX: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   k; Score 30.4; Di
k; Pred. No. 4.2;
12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 59.49
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                               RESULT 2
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                     셤
```

```
COMPARE TRADABLE PROPERTY

COMPARE TRADABLE PROPERTY

MODITAL TPE: 93104-7092

COMPARE TRADABLE PROPERTY

MODITAL TPE: 1040PV disk

COMPARE TRADABLE PROPERTY

MODITAL TPE: 1040PV disk

COMPARE TRADABLE PROPERTY

MATCHER STREAM COMPARED TO COMPARE
```

ô

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
APPLICANT: Belli, Barbara A.
APPLICANT: Belli, Barbara A.
APPLICANT: BOLIS SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 40, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION
GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT: Dolo, John M.
APPLICANT: Chang Stephen M.W.
APPLICANT: Chang Stephen M.W.
APPLICANT: David A.
APPLICANT: David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indela
                                                                                                                                                                                                                                                                                                                                                                       CITEEST SOU COLUMBIA CENTER, 701 FILTH AVENUE
CITYER: Washington
COUNTRY: US
ZIP: 98104-7092

COMPUTER: FLORY disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN DATA:
ROBENTARE: PATENTIN DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION AGAS:
NAME: MCMASTERS, DAVID D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
THE TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
THE TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
THE TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
THE TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:

                                                                                                                                                                                                                                                                                                                         E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
82.2%; Score 30.4; Di
Best Local Similarity 59.4%; Pred. No. 4.2;
Matches 19; Conservative 12; Mismatches
         Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Seattle
STATE: Washing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: US
                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
STREET: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
TOPOLOGY:
US-08-739-167-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Delo, John M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Driver, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Balli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                           Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 52;
                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READBLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: EAR PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTOMER'AGENT INFORMATION:
NAME: MCAMBER: 33,963
REGISTRATION NUMBER: 303049.423C7 / 1146.008
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206, 622-4900
TELEFAX: (206, 622-6031
INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS:
LENGTH: 52 Dase pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                           82.2%; Score 30.4; DB 1; 59.4%; Pred. No. 4.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                            1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                         12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 40, Application US/08739167
Patent No. 5843723
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
US-08-739-167-80
; Sequence 80, Application US/08739167
; Patent No. 5843723
; GENERAL INFORMATION:
                                                                                                                                                                                        Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                    single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and E
STREET: 6300 Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Seattle
STATE: Washington
                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: linear
US-08-739-167-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
ZIP: 98104-7092
                                                              TOPOLOGY:
US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
US-08-739-167-40
                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                d
```

g

```
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-931-869-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-931-869-40
US-08-404-796-80
                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Debensky Jr, Thomas W APPLICANT: Polo, John M. APPLICANT: Polo, John M. APPLICANT: Danez, Carlos E. APPLICANT: Chang, Stephen M.W. APPLICANT: Chang, Stephen M.W. APPLICANT: Driver, David A. APPLICANT: Driver, David A. APPLICANT: Belli, Barbara A. APPLICANT: Belli, Barbara A. TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82.2%; Score 30.4; DB 3; Length 52; 59.4%; Pred. No. 4.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTY: US

COUNTY: 08104-7092

ZIP: 98104-7092

ZIP: 98104-7092

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: PatentIn Release #1.0, Version #1.25

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796

FILING DATE: 1-MAR-1995

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
NAME: MCMASTERE, David D.
REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006

TELEPHONE: (206) 682-6031

INFORMATION FOR SEQ ID NO: 80:
SEQUENCIE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                        CURRENT APPLICATION DATA:

SOFTWARE:

CURRENT APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE:

FILING DATE:

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME:

NAME:

REFERENCE/DOCKET NUMBER:

REFERENCE/DOCKET NUMBER:

TELEPHONE:

TELEPHONE:

(206) 622-4900

TELEPHONE:

TELEPHONE:

(206) 622-4900

TELEPHONE:

TELEPHONE:

SEQUENCE CHARACTERISTICS:

LENGTH:

SEQUENCE CHARACTERISTICS:

LENGTH:

SEQUENCE CHARACTERISTICS:

LENGTH:

STUBENCE CHARACTERISTICS:

LENGTH:

TOPOLOGO

STUBENCE CHARACTERISTICS:

LENGTH:

CHARACTERISTICS:

CHARACTERISTICS:

LENGTH:

CHARACTERISTICS:

CHARACTERISTICS:

LENGTH:

CHARACTERISTICS:

LENGTH:

CHARACTERISTICS:

LOOPER CHARACTERISTICS:

LOOPER CHARACTERISTICS:

CHARACTERIST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Mismatches
    PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 80, Application US/08404796; Patent No. 6015686; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.45
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: linear
US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Seattle
STATE: Washing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                Gaps
                                                                                                                                                                                                                                                                                                       APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Garlos B.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Driver, David A.
APPLICANT: Bell, Barbara A.
APPLICANT: Bell, Barbara A.
TITLE OF INVENTION: EURKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
  Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3; Length 52;
                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION DATA:
PELLOR APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MACHASTERS, DATA:
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 930049-423CS / 1146.006
TELEBPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    930049.423C5 / 1146.006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
    DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82.2%; Score 30.4; D 59.4%; Pred. No. 4.2;
82.2%; Score 30.4; D
59.4%; Pred. No. 4.2;
ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                          Sequence 40, Application US/08911869
Patent No. 6015694
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
US-08-931-869-80
; Sequence 80, Application US/08931869
; Patent No. 6015694
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: SEED and BERRY I
STREET: 6300 Columbia Cente
CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 59.44
Matches 19; Conservative
                       Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
```

us-09-699-667e-63.siz.rni

```
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3; Length 52;
                                                                                                                                                    NAME: MCMBSters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-041-1999
CLASSIFICATION: <UNKnown>
ATTORNEY/AGENT INFORMATION:
NAME: MCMASTER'S, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compartible
COPENATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                  SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-Jul-1999
CLASSIFICATION: <UNknown>
ATTORNEY/AGENT INFORWATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82.2%; Score 30.4; E
59.4%; Pred. No. 4.2;
:ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Thomas W
                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-6930
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 80, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dubensky Jr, Thom:
Polo, John M.
Jolly, Douglas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.49
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JS-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
  APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joilly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Briver, David A.
TILLE CP INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCES: 128
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY, "19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
GAPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
APPLICATION DATA:
FILING DATE: 16.5EP-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMBAECES David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; DB 3;
4.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TOPOLOGY: linear
US-08-931-869-80
                                                                                                                                                                                                                                                                                                               COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

ô

Gapa

.; 0

ઠે 셤

```
APPLICANT: Dubensky Jr., Thomas W.

APPLICANT: Dubensky Jr., Thomas W.

Polo, John M.

Belli, Barbara A.

Schlisinger, Sondra

Dryga, Sergey A.

Frolov, Ilya

TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS

SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 701 Fifth Avenue, Suite 6300 CITY: Seattle STATE: Washington COUNTRY: USA
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, Davida A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITT: NEWPORT BEACH
STATE: CALIFORNIA
                                                                                                                                                                                                                                              ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/09/236,140A
FTLING DATE: 22-Jan-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECHMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
TELEFRAX: (949) 823.6100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.2%; Score 30.4; Di
59.4%; Pred. No. 4.2;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 98104-7092
COMPUTER READMBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 39, Application US/09415784
Patent No. 6391632
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS ADDRESSE: Seed I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 59.4%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                   ö
                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                     APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: 124
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 30.4; DB 3; Length 52;
Pred. No. 4.2;
                             Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 92660
COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: CURNOWN>
ATTORNEY/AGENT IRFORMATION:
NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 840 NEWPORT CENTER DRIVE, SUITE 700 CITY: NEWPORT BEACH
                           4; DB 3; 4.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .,
-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPPENHEIMER WOLFF & DONNELLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                             4 UCCACCUCCUCGCGGUNNNNNNGGGGCAUGCG 35
                         82.2%; Score 30.4; D
59.4%; Pred. No. 4.2;
ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
82.2%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 4.2;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dubensky Jr, Thomas W Polo, John M. Ibanez, Carlos E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 80, Application US/09236140A; Patent No. 6376236; GENERAL INFORMATION:
                                                                                                                                                                                                                                                    Sequence 40, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (949) 823.6100 INFORMATION FOR SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: CALIFORNIA COUNTRY: US
                                                                     19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
US-09-236-140A-80
                                                                     Matches
```

ð

```
CURRENT APPLICATION DATA:

### CURRENT APPLICATION DATA:

### PILING DATE: 08-0ct-1999

### FILING DATE: 08-0ct-1999

### FILI
```

Search completed: March 15, 2005, 20:44:22 Job time : 61.5044 secs

THIS PAGE BLANK (USPTO)

Title: Perfect score:

Sequence:

OM nucleic -

Run on:

Scoring table:

Searched:

Database

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers

1. 57

/organism="synthetic construct"
/mol.type="unassigned RNA"
/db_xref="taxon:32630"
AR368219 Sequence
CQ758677 Sequence
AR221187 Sequence
AR231614 Sequence
AR231698 Sequence
AR351208 Sequence
BD085609 Recombina
CQ536436 Sequence
CQ541404 Sequence
CQ541404 Sequence
AX772503 Sequence
AX772503 Sequence
AX772503 Sequence
CQ5540994 Sequence
CQ5540994 Sequence
CQ5540994 Sequence
CQ5540994 Sequence
CQ5540994 Sequence
CQ554099 Sequence
AR291353 Optionucleo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGUCCACCUCCCCCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 57; DB 6; 71.9%; Pred. No. 2.3e-05; ive 16; Mismatches 0
                                                                                                                                                                                                                                                                                                                                        RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                          other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57 bp
Sequence 45 from Patent WO9955856.
AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                      AX012282 57 bp
Sequence 44 from Patent WO9955856.
                                                                                         CQ536436
CQ543404
AX772502
                                                                                                                                                                                           AR291353
BD180856
AR123049
CQ552634
                                         AR234088
AR237698
                                                                       BD078782
BD085609
                                                              4R353208
                                                                                                                                           AX404877
                                                                                                                                                                         CQ550490
                                                                                                                                                               CQ540994
                                                                                                                                                                                                                                                                                                                                                          AX012282
AX012282.1 GI:9998343
                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 41; Conserv
   4444
44044
440.77
4404
4906
4906
4906
4906
                                                                                          23.2
23.2
23.2
23.2
23.2
                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                   RESULT 1
AX012282
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AX012283
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
    ORIGIN
                                                                                            00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                      March 15, 2005, 12:35:18; Search time 1124 Seconds (without alignments) 2457.248 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                   1 ggguccaccuccucgeggun......uucgcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012283
AX012285
AX012287
AX012289
AX012289
AX012289
AX012291
AX012291
AX012291
AX012291
AX012291
AX012391
AR031047
AR043422
AR043422
AR043422
AR043337
AR043337
AR043337
AR043337
AR043337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012282
                                                                                                                                                                                                       1981570
             5.1.6
Compugen Ltd.
                                                                                                                                                                                  4708233 seqs, 24227607955 residues
                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
             GenCore version (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX012288
AX012286
AX012288
AX012288
AX012290
AX012290
AX012290
AX012291
AX021047
AX021047
AX021047
AR043422
AR04343427
AR0433462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR183796
AR183836
AR368179
                                                                                                                                                   IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                          US-09-699-667E-61
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                           gb_sts:*
gb_sy:*
gb_un:*
                                                                                                                                                                                                                                                                                                         ggb_htg:.*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                GenEmbl: *
                                                                                                                                                                                                                        Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                   23:
33:
10:
11:
11:
14:
```

ö

Score

Result

57 57 57 57 57 57 57 57 57

ö

PAT 06-SEP-2000

셤

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 49 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBKOOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 50 04-NOV-1999;
ANANVORANICH SIRINET (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGTCCACCTCCTCGCGGTCCGGCCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC
                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                     Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 57; DB 6; Length 57 Best Local Similarity 71.9%; Pred. No. 2.3e-05; Matches 41; Conservative 16; Mismatches 0; Indels
                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
           1. 57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1..57
/organism="synthetic construct"
/mol type="unassigned RNA"
/db_xref="taxon:32639"
                                                                                                                                                 ch 100.0%; Score 57; DB 6; 1 Similarity 71.9%; Pred. No. 2.3e-05; 41; Conservative 16; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                          57 bp
Sequence 49 from Patent W09955856.
AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 50 from Patent WO9955856.
ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                       Best Local Similarity
                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
AX012288
                                                                                                                                                                                                                                                                                                                            RESULT 5
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 47 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 995886-A 45 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Batent: WO 995885-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                       1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGGCTTCGCATGCGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGTCCACCTCCTCGCGGTCCGCCCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 57; DB 6; Length 57; Best Local Similarity 71.9%; Pred. No. 2.3e-05; Matches 41; Conservative 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                    ch 100.0%; Score 57; DB 6; Length 57; 1 Similarity 71.9%; Pred. No. 2.3e-05; 41; Conservative 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                     1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon.32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.57
/organism="synthetic construct"
/mol type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         other sequences; artificial sequences.
 other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012285 57 bp
Sequence 47 from Patent W09955856.
AX012285
AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012286 57 bp
Sequence 48 from Patent WO9955856.
AX012286
                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                         Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                Matches
                   REFERENCE
                                       AUTHORS
                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                    ORIGIN
```

ö

0; Gaps

PAT 06-SEP-2000

PAT 06-SEP-2000

57

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995585-A 46 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERRROOKE (CA)

1. 057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 53 04-NVV-1999;

ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGTCCACCTCCTCGCGGTCCGACCTGGGCATGCCTTCGGGCATGGCTACGGACCC
1 GGGTCCACCTCCTCGCGGTCCGATCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64.9%; Score 37; DB 6; Length 37; 67.6%; Pred. No. 32; 0; Indels tive 12; Mismatches 0; Indels
                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. 37
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                      construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGTCCACCTCGTCGCGGTCCGACCTGGGCATGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                    synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83.2%; Score 47.4; DB 64.9%; Pred. No. 0.02;
                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="synthetic constr
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 64.9%; Pred. No. 0.02
Matches 37; Conservative 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR021007 52 bp Sequence 40 from patent US 5789245.
                                                                                                           Sequence 46 from Patent W09955856.
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012291 37 bp
Sequence 53 from Patent WO9955856.
                                                                                              57 bp
                                                                                                                                                    AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX012291.1 GI:9998352
                                                                                                                                                                                               synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 67.63
25; Conservative
                                                                                              AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
JOURNAL
                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
AX012291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
AR021007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                       RESULT 9
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 51 04-NOV-1999;
PARANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHEREROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Barent: W0 995886-A 52 04-NOV-1999;

ANANVORANICH STRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                      57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 100.0%; Score 57; DB 6; Length 57; Similarity 71.9%; Pred. No. 2.3e-05; 41; Conservative 16; Mismatches 0; Indels
                    Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 57; DB 6; Length 57; 71.9%; Pred. No. 2.3e-05; ive 16; Mismatches 0; Indels
                18; Score 57; DB 6; Length 57
19; Pred. No. 2.3e-05;
16; Mismatches 0; Indels
                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="synthetic construct"
/mol type="unassigned RNA"
/mol zref="taxon:32630"
/noce="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="synthetic nucleic acid"
                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                           other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX012290 57 bp
Sequence 52 from Patent W09955856.
AX012290 GI:9998351
                                                                                                                                                                                                                            Sequence 51 from Patent W09955856.
                  100.0%;
71.9%; F
                                                                                                                                                                                                                                                                                              AX012289.1 GI:9998350
                                                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
                                                       41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 41; Conserva'
                Query Match
Best Local Similarity
Matches 41; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
```

Query Match

ORIGIN

Matches

DEFINITION

RESULT, 8 AX012290 LOCUS

ACCESSION VERSION

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS

TITLE JOURNAL

FEATURES

ORIGIN

Bource

FEATURES

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS JOURNAL

DEFINITION

RESULT 7 AX012289

ઠ

ACCESSION VERSION

ö

ö

PAT 06-SEP-2000

ö

Gaps

ô

PAT 05-DEC-1998

. . . . . . .

ö

Gарв

ö

ORGANISM

SOURCE

REFERENCE AUTHORS

TITLE JOURNAL

PEATURES

ORIGIN

ACCESSION VERSION KEYWORDS

```
PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                            Unclassified.

1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 5814482-A 80 29-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ibanez, C.E., Chang, S.M.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 52;
                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 53.3%; Score 30.4; DB 6; Best Local Similarity 59.4%; Pred. No. 3.1e+03; Matches 19; Conservative 12; Mismatches 1;
                                                  Query Match 53.3%; Score 30.4; DB 6; Best Local Similarity 59.4%; Pred. No. 3.1e+03; Matches 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 53.3%; Score 30.4; DB 6; Best Local Similarity 59.4%; Pred. No. 3.18+03; Matches 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 52)
Dubensky, T. W. Jr., Polo, J.M., Ibanez, C. Jolly, D.J., Driver, D.A. and Belli, B.A. Alphavirus vector constructs
Patent: US 5843723-A 40 01-DEC-1998;
                                                                                                                                          1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52 bp
Sequence 80 from patent US 5814482.
AR043462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .52
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52 bp
Sequence 40 from patent US 5843723.
AR062337
 /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search completed: March 15, 2005, 18:04:51
Job time : 1128 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers

    .52
    /organism="unknown"

                                                                                                                                                                                                                                                                                               AR043462.1 GI:5964470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:5990028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR062337.1
                                                                                                                                                                                                                                                                                AR043462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                          RESULT 14
AR043462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                 ORIGIN
                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                Ubages 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 40 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
Unclassified.
1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5782245-A 80 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 05-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (Dases 1 to 52)
Dubensky T.W. Jr., Polo,J.M., Jolly,D.J. and Driver,D.A. Eukaryotic layered vector initiation systems
Patent: US 581482-A 40 29-SEP-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53.3%; Score 30.4; DB 6; Length 52; 59.4%; Pred. No. 3.1e+03; ive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                               Length 52;
                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                             ch 53.3%; Score 30.4; DB 6; 1 Similarity 59.4%; Pred. No. 3.1e+03; 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                           /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 80 from patent US 5789245. AR021047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52 bp
Sequence 40 from patent US 5814482.
AR043422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="unknown"
AR021007
AR021007.1 GI:3975622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR021047.1 GI:3975662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR043422.1 GI:5964430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 59.4%
Matches 19; Conservative
                                                                                    Unclassified.
                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR043422
                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
```

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS JOURNAL

PEATURES TITLE

ORIGIN

ઠે

RESULT 12 AR021047 LOCUS

Matches

원

ö

Gaps

ö

ö

Gaps

;

SOURCE ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL FEATURES

RESULT 13 AR043422 LOCUS

THIS PAGE BLANK (USPTO)

```
777.0
776.00
776.00
776.00
776.00
775.00
775.00
                                                                                                                                                                                                                                                                                                                                                   US-09-949-016-18503/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-18503
 000 0000
                                                                                                                                                                            000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 18503, A Sequence 176107, Sequence 17, Appli Sequence 31, Appli Sequence 31, Appli Sequence 16753, A Sequence 16755, A Sequence 14546, A Sequence 14550, A Sequence 14551, A Sequence 14551, A Sequence 14552, A Sequence 14552, A Sequence 14552, A Sequence 14553, A Sequence 14555, A Sequence 14555, A Sequence 14555, A Sequence 14556, A Sequence 14556, A Sequence 14556, A Sequence 14561, A Sequence 1
                                                                                              March 15, 2005, 10:18:52; Search time 33.1579 Seconds (without alignments) 986.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                            2405568
                                                                                                                                                                                                                                                                                                                                                                                                                       Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*
(cgn2_6/ptodata/1/ina/5B_COMB.seq:*
(cgn2_6/ptodata/1/ina/6A_COMB.seq:*
(cgn2_6/ptodata/1/ina/6B_COMB.seq:*
(cgn2_6/ptodata/1/ina/RECOMB.seq:*
(cgn2_6/ptodata/1/ina/RECTUS_COMB.seq:*
(cgn2_6/ptodata/1/ina/RECTUS_COMB.seq:*
                5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-949-016-18503

US-08-756-506-1

US-09-328-925-50

US-09-054-213-1

US-09-949-016-16575

US-09-949-016-16575

US-09-949-016-14546

US-09-949-016-14547

US-09-949-016-14547

US-09-949-016-14549

US-09-949-016-14550

US-09-949-016-14553

US-09-949-016-14555

US-09-949-016-14556

US-09-949-016-14560

US-09-949-016-14560

US-09-949-016-14560

US-09-949-016-14560

US-09-949-016-14560

US-09-949-016-14560

US-09-949-016-14561

US-09-949-016-14561
                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                              1202784 segs, 818138359 residues
                version :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                      nucleic search, using sw model
                                                                                                                                                                                    1 bksgcauggcuaagggaccc 20
                                                                                                                                                                                                                IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
               GenCore
Copyright (c) 1993
                                                                                                                                                         US-09-699-667E-66
20
                                                                                                                                                                                                                                                                                                                    seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
11725
11725
11725
11725
11725
12595
2596
818128
818128
818128
818128
818128
818128
818128
818128
818128
818128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .........
                                                                                                                                                                        Perfect score:
                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM nucleic
                                                                                                                                                                                                                                                                                                                       Minimum DB
Maximum DB
                                                                                                                                                                                          Seguence:
                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                   ë
ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run
```

000000

00000000000000000000

```
FACENT NO. GELISAY

FACENT NO. GELISAY

FACENT NO. GELISAY

FACENT NO. GELISAY

APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CLOOLISO7

CURRENT APPLICATION NUMBER: 06/241,755

PRIOR FLING DATE: 2000-04-04

PRIOR PELICATION NUMBER: 60/237,768

PRIOR FLING DATE: 2000-10-03

PRIOR PLING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FABESEQ for Windows Version 4.0

SEQ ID NO 18503

LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
Sequence 14566, A Sequence 14567, A Sequence 1747, A Sequence 12130, A Sequence 16641, A Sequence 1654, A Sequence 16339, A Sequence 1652, A Sequence 1652, A Sequence 1652, A Sequence 48, Appli Sequence 44, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
US-09-949-016-176107/c
; Sequence 176107, Application US/09949016
; Patent No. 681239
; GENERAL INFORMATION:
; APPLICANT: VEWTER, US Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THERE;
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THERE;
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                  US-09-949-016-14567
US-09-513-9990-17447
US-09-053-313-33
US-09-949-016-12330
US-09-949-016-12641
US-09-949-016-12641
US-09-949-016-12655
US-09-949-016-12651
US-09-949-016-12651
US-09-949-016-12651
US-09-949-016-12651
US-09-949-016-12651
US-09-949-016-12651
US-09-949-016-1333
US-09-949-016-13013
US-08-946-1658-48
US-08-948-016-13013
US-08-948-016-13013
US-08-948-016-13013
US-08-948-016-13013
US-08-948-016-13013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79.0%; Score 15.8; DB 4; 73.7%; Pred. No. 1.1e+02; ive 4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 18503, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     523 GGCGCATGGCAAAGGGACC 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 73.7
Matches 14, Conservative
  818128
818128
2152
215
52789
52789
60304
79578
97521
141248
143248
143248
```

```
Sequence 50, Application US/09328925
Patent No. 6610906
GENERAL INFORMATION:
APPLICANT: Kurachi, Kotoku
APPLICANT: Kurachi, Sumiko
TITLE OF INVENTION: Use Thereof
FILE REFRENCE: UW-03603
CURRENT APPLICATION NUMBER: US/09/328,925
CURRENT FILING DATE: 1999-06-09
NUMBER OF SEQ ID NOS: 84
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 11725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 15.8; DB 4; Length 11725; Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Lander, Eric S.
APPLICANT: Daley, George Q.
APPLICANT: Cargill, Michele
APPLICANT: Cargill, Michele
APPLICANT: Rozen, Steven G.
TITLE OF INVENTION: CODING SEQUENCE POLYMORPHISMS
TITLE OF INVENTION: IN VASCULAR PATHOLOGY GENES
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: TAMILITON, BROOK, SMITH & REYNOLDS, P.C.
STREET: Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READBLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows 95
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/054,272
FILING DATE: 01-ARP-1998
CLASSIFICATION 1435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WHI98-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-054-272-31/c
; Sequence 31, Application US/09054272
; Patent No. 6692909
877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAWE: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: WHIS
TELECOMMUNICATION INFORMATION:
TELEFAN: 781-861-6240
TELEFAX: 781-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 79.0
Best Local Similarity 73.7
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
COGANISM: Homo sapiens
US-09-328-925-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Lexington STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02173
                                                                                                    US-09-328-925-50/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 11725;
                                                                                                                                                                                        79.0%; Score 15.8; DB 4; Length 601; 73.7%; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                      RESULT 3
US-08-756-506-1/c
; Sequence 1, Application US/08756506
; Patent No. 5905185
; GENERAL INFORMATION:
; APPLICANT: Garner, Ian
APPLICANT: Temperley, Simon M.
APPLICANT: Temperley, Simon M.
APPLICANT: Foster, Donald C.
; APPLICANT: Sprecher, Cindy A.
; APPLICANT: Prunkard, Donna B.
; TITLE OF INVENTION: ROCTEIN ENCHANCE INTER OF INVENTION: ANIMALS
CORRESPONDENCE ADDRESS:
STREFT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: join(3520..3630, 5093..5117, 5210..5347, 5450 LOCATION: ..5584, 8253..8395, 9269..9386, 10516..11102)
                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 98102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
79.0%; Score 15.8; DB 2;
Best Local Similarity 73.7%; Pred. No. 1.5e+02;
Matches 14; Conservative 4; Mismatches 1;
                                                                                                                                                                                                                               4; Mismatches
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 176107
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 95-28
TELEPHONE: 206-442-6672
INFORMATION FOR SEQ 1D NO: 1: SEQUENCE CHARACTERISTICS:
LENGTH: 11725 base pairs
TYPE: nucleic acid
STRANDEDNESS: Gouble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                 14; Conservative
                                                                                                                                                                                                       Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seattle
                                                                                                                                               US-09-949-016-176107
                                                                                                         TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                          Query Match
```

1 BKSGCAUGGCUAAGGGACC 19

ö

Gaps

us-09-699-667e-66.std.rni

```
Query Match
Best Local Similarity 82.4
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 82.4*
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-949-016-14546/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Human
                                                                                                                                                 US-09-949-016-4833
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FACELIANT OF STATES ASSOCIATED

FACELIANT VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT FILING DATE: 2000-04-14

PRIOR PELLING DATE: 2000-10-20

PRIOR PELLING DATE: 2000-10-03

PRIOR PELLING DATE: 2000-10-03

PRIOR PELLING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FASESEQ for Windows Version 4.0

LENGTH: 14802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4833, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF FILE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT APPLICATION NUMBER: 00/241,755
PRIOR APPLICATION NUMBER: 60/231,768
PRIOR PILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 15.8; DB 4; Length 14802;
Pred. No. 1.5e+02;
4; Mismatches 1; Indels 0.
                                                                                                                                                                                                                      Length 11725;
                                                                                                                                                                                                                    Query Match 79.0%; Score 15.8; DB 4; Best Local Similarity 73.7%; Pred. No. 1.5e+02; Matches 14; Conservative 4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 16753, Application US/09949016; Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2247 GGGGCATGGCAAAGGGACC 2229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; LOCATION: (1). ... (14802)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-16753
                                                                                                                                                                                                                                                                                                                                                    877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 73.7%;
Matches 14; Conservative
INFORMATION FOR SEQ ID NO: 31
SEQUENCE CHARACTERISTICS:
LENGTH: 11725 base pairs
                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: Genomic DNA
                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-949-016-16753/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-949-016-4833
                                                                                                                                                                        US-09-054-272-31
                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
```

```
FACENTAL NO. 1821333

FARENAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CLOO1307

CURRENT FILING DATE: 2000-04-14

FRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR APPLICATION NUMBER: 60/231,498

FRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 16575

LENGTH: 25198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE 'REFERENCE: CL001307
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR PILING DATE: 2000-10-09
PRIOR PILING DATE: 2000-10-03
PRIOR PELICATION NUMBER: 60/237,768
PRIOR PILING DATE: 2000-10-03
PRIOR PELICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77.0%; Score 15.4; DB 4; Length 25198; 82.4%; Pred. No. 2.5e+02; ive 2; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                              Score 15.4; DB 4;
Pred. No. 2.1e+02;
                                                                                                                                                                                           77.0%; Scor.
82.4%; Pred. No. 4.1.
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 4833
LENGTH: 3595
TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-949-016-16575
; Sequence 16575, Application US/09949016
; Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14546, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FEATURE:
| NAME/KEY: misc_feature
| LOCATION: (1)...(25198)
| OTHER INFORMATION: n = A,T,C or G
US-09-949-016-16575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22122 GCATGGCTGAGGGACCC 22138
                                                                                                                                                                                                                                                                                                                                                                    2520 GCATGGCTGAGGGACCC 2536
                                                                                                                                                                                                                                                                                                                      4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 GCAUGGCUAAGGGACCC 20
```

```
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
"...rhes 12; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
US-09-949-016-14547/c
; Sequence 14547, Application US/09949016
; Patent No. 681239
; GENERAL INFORMATION:
; APPLICANT: VEWTER, J. Craig et al.
; APPLICANT: VEWTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; FILE REPRENCE: CLOO1307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT PILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR FILING DATE: 2000-10-20
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR APPLICATION NUMBER: 60/231,498
; RRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 14549, Application US/09949016

Batent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF TILE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR PILING DATE: 2000-10-20
PRIOR PLING DATE: 2000-10-02
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                            Length 818128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 15.4; DB 4; Length 818128;
Pred. No. 3.2e+02;
5; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                   Query Match 77.0%; Score 15.4; DB 4; Best Local Similarity 70.6%; Pred. No. 3.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                  5; Mismatches
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             248008 CTGGCATGGCTAAGGGA 247992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :::|||:||:|||:|||
248008 CTGGCATGGCTAAGGGA 247992
                                                                                                                                                              FEATURE:

// NAME/KEY: misc_feature

// LOCATION: (1)...(818128)

// OTHER INFORMATION: n = A,T,C or G

US-09-949-016-14546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc_feature

i LCCATION: (1)...(818128)

CTHER INFORMATION: n = A,T,C or G

US-09-949-016-14547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 70.6%;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-949-016-14548/c
                                                                                                TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Human
                           SEQ ID NO 14546
LENGTH: 818128
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
```

```
ESOURT NO. 6812339

Sequence 14549, Application US/09949016

Sequence 14549, Application US/09949016

Patent No. 6812339

Sequence 14549, Application US/09949016

Patent No. 6812339

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WINDER: US/09/949,016

CURRENT FILING DATE: 2000-04-1,755

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTHARE: PSECENTIAL WINDOWS VERSION 4.0

SEQ ID NO 14549

LENGTH: 918128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-949-016-14550/c
; Sequence 14550, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; CURRENT APPLICANTS: US/09/949,016
; CURRENT PELLING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                         .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 15.4; DB 4; Length 818128; Pred. No. 3.2e+02; 5; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                           Query Match 77.0%; Score 15.4; DB 4; Length 818128; Best Local Similarity 70.6%; Pred. No. 3.2e+02; Matches 12; Conservative 5; Mismatches 0; Indels 0;
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 14548
LENGTH: 818128
TYPE: DNA
ORGANISM: Human
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               248008 CTGGCATGGCTAAGGGA 247992
                                                                                                                                                                                                                                      ) NAME/KEY: misc_feature

) LOCATION: (1)...(818128)

) OTHER INFORMATION: n = A,T,C or G

US-09-949-016-14548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; LOCATION: (1)...(818128)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-14549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 248008 CTGCCATGCCTAAGGGA 247992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.0%;
ilarity 70.6%;
Conservative
```

```
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14551, Application US/09949016

j Batent No. 6812339

j GENERAL INFORMATION:

j APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

FILE SPERENEW APPLICATION NUMBER: US/09/949,016

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

j PRIOR FILING DATE: 2000-10-03

j PRIOR FILING DATE: 2000-10-03

j PRIOR PILING DATE: 2000-09-08

j NUMBER OF SEQ ID NOS: 207012

s SOFTWAMER: PRESENCE OF WINDOWS Version 4.0

s SRO ID NO 14-641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
US-09-949-016-14552/c
; Sequence 14552, Application US/09949016
; Fatent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 77.0%; Score 15.4; DB 4; Length 818128; Best Local Similarity 70.6%; Pred. No. 3.2e+02; Matches 12; Conservative 5; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 77.0%; Score 15.4; DB 4; Length 818128; Best Local Similarity 70.6%; Pred. No. 3.2e+02; Matches 12; Conservative 5; Mismatches 0; Indels 0;
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR PILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SQT NAME: FREESEQ for Windows Version 4.0
SEQ ID NO 14550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      248008 CTGGCATGGCTAAGGGA 247992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    248008 CTGGCATGGCTAAGGGA 247992
                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: (1)....(818128)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-14550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NAME/KEY: misc_feature
| LCCATION: (1)...(818128)
| OTHER INFORMATION: n = A,T,C or G
US-09-949-016-14551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-949-016-14551/c
                                                                                                                                                                                                                                                                                       ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 14551
LENGTH: 818128
                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

OLISO MATHER TOP SILL

•

```
March 15, 2005, 15:20:59 ; Search time 804.561 Seconds (without alignments) 946.212 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                          241816
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                 34239544 segs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                           US-09-699-667E-66
20
1 bksgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                       IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                           Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                 Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

1: 90\_estl:\*
2: 90\_estl:\*
3: 90\_htc:\*
4: 90\_estl:\*
5: 90\_est4:\*
6: 90\_est4:\*
6: 90\_est6:\*
7: 90\_est6:\*
8: 90\_9ss1:\*

............

Database :

A Core Match Length DB 12.8 64.0 58 9 12.4 62.0 54 9 12.2 61.0 54 9 12.2 61.0 54 9 12.2 61.0 54 9 12.2 61.0 54 9 12.2 61.0 54 9 12.2 61.0 54 9 12.2 61.0 54 9 12.2 61.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 52 9 12.2 60.0 55 6 6 12.2 60.0 55 6 6 12.2 60.0 55 6 6 12.2 60.0 55 6 6 12.2 60.0 55 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		Description	AL763075 Arabidops	CR183540 Forward B	AI316323 uj99b12.y	CG715094 1119039H0	AZ876899 2M0192C06	AI937668 wp82b01.x	CL256773 XS0948 Sa	AZ804424 2M0065C11	AL940566 Arabidops	BM394673 50072-2-5	AZ658079 1M0534H11	BM395243 50072-2-8	AZ820217 2M0092113	BH789679 SALK 0444	AL771940 Arabidops	AL771951 Arabidops	BX897261 Arabidops	BH811451 SALK 0586	BX291747 Arabidops	BM393985 50072-2-1	BX890873 Arabidops	CB274124 mai89a11.	AI633365 t896c12.x	AL944166 Arabidops
S	SUMMARIES	ID	AL763075	CR183540	AI316323	CG715094	AZ876899	AI937668	CL256773	AZ804424	AL940566	BM394673	AZ658079	BM395243	AZ820217	BH789679	AL771940	AL771951	BX897261	BH811451	BX291747	BM393985	BX890873	CB274124	AI633365	AL944166
S		DB	6	0	-	σ	80	٦	σ	80	σ	4	ω	4			-	•							-	0
S		Length	40	58	40	99	34	46	51	56	54	23	23	27	29	34	36	38	42	20	51	25	25	56	59	29
S		ery	4.0	4.0	3.0	3.0	0.2	0.7	2.0	1.0	0.1	0.0	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.0
8	de	Αğ	Ý	Ó	Ġ	ø			Ġ	Ö	ø	ő	ő	ø	ø	õ	õ	ø	ق	ø	ø	ø	ō	ø	ő	ō
0 0 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Score	12.8	12.8	12.6	12.6	12.4	12.4	12.4	12.2	12.2	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
α		Result No.	7	7 0	о С	4	ß	9			6	10	-	12	c 13	14	15	16	17	18	19	20	21	c 55	23	24

CL211870 W084D04 G BM395141 50072-2-7 AL770473 Arabidops CC178564 NPX457 Ba BX291304 Arabidops AL482429 T. brucei AU105803 AU105803 AL940176 Arabidops CR221046 Forward s AZ628524 1M0480J11 AL761298 Arabidops H52868 EST0022 Tes BX532971 Arabidops BX532971 Arabidops BX532971 Arabidops BX532971 Arabidops GC049927 OLS059689 CC049927 OLS059689 CC049927 OLS059689 CG705810 OLS0588-1 BM127716 ie98h06.y	ALIGNMENTS  ALIGNMENTS  ALIGNMENTS  ALIGNMENTS  ALIGNMENTS  ALF63075  Brabidopsis thaliana T-DNA flanking sequence GK-032C06-014864, denomic curvey sequence.  AL763075.1 GI:21511171  GSS.  ALA763075.1 GI:21511171  GSS.  ALA763075.1 GI:21511171  GSS.  ALA763075.1 GI:21511171  GSS.  ALA763075.1 GI:2151171  GSS.  ALA763075.1 GI:2151000  GSS.  ALA763075.1 GI:21510000  GASI-Ket SimpleSearch: a flanking sequence tog FSST) database for the identification of -DNA insertion mutants in Arabidopsis  LA131000  BOSSO.  ALA763075.1 GI:2151000  BOSSO.  ALA763075.1 GI:2151000  BOSSO.  ALA763075.1 GSSO.  ALA763075.1 GSSO.  BOSSO.  ALA763075.1 GSSO.  ALA763075.1 GSSO.  BOSSO.  ALA763075.1 GSSO.  BOSSO.  ALA763075.1 GSSO.  ALA763075.1 GSSO.  ALA763075.1 GSSO.  BOSSO.  ALA763075.1 GSSO.  ALA77075.1 GSSO.  ALA763075.1 GSSO.  ALA77075.1 GSSO.  ALA763075.1 GSSO.  ALA77075.1 GSSO.  ALA77075.1 GSSO.  ALA77
CL211870 BM395141 AL770473 AL770473 CC178564 BX291304 TA254C04P AL05803 AL96033 AL96036 AL96128 AL761298 AL761298 BX532971 BX5723437 BX532971 BX532971 CC705810 CC705810	ALJGNMENTS  ALJG3075  ALADidopsis thaliana T-DNA flanking genomic survey sequence.  ALJG3075  ALADS075.1 GI:21511171  GSS.  Arabidopsis thaliana (thale cress) Arabidopsis thaliana Eukaryota; Viridiplantae; Streptophy Spermatophyta; Magnoliophyta; eudico rosids; eurosids II; Brassicales; Br Li,Y., Rosso,M.G., Strizhov,N., Vieh GABT-Kat SimpleSearch: a flanking set the identification of T-DNA insertio thaliana Bioinformatics 19 (11), 1441-1442 (2 22755829 12874060  An Arabidopsis thaliana T-DNA mutage flanking sequence tag-based reverse flanking sequence flanking sequence has been recovered fro this sequence has been recovered fro It indicates an insertion close to o Derails on the protocols used for ge described in References 1-3. The sequence for Plant Breeding Research in the c GABI-Kat is part of the German Plant
0400001000000000000000000	aliana T- aguence :21511171 aliana (t) aliana (t) aliana (t) aliana (t) (G., Stri tion of T 19 (11), 1
000000000000000000000000000000000000000	tring in Dide Co.
0 2 5 8 4 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	AL763075  AL763075  AL763075  AL763075  AL763075  AL763075.1 GI:21511171  GSS.  Arabidopsis thaliana (tha Arabidopsis tha Arabidopsis tha (tha Arabidopsis tha Arabidopsis tha (tha Gases 1 to 40)  Strizhov,N., Rosso,M.G., Direct Submission (tha Bacetina an insertion Submitted (31 MAR-2004) Wassellant Breeding Researidor Inserting Grandling Resear
000000000000000000000000000000000000000	THE THE TREE TO BE TH
O O O O O O O O O O O O O O O O O O O	AL763075 Arabidopsis th AL763075 AL763075 AL763075.1 GI GGSS. Arabidopsis th Ii,Y., Rosso,M GABI-Kat Simpl Li,Y., Rosso,M Li,Y
	A STATE OF THE STA
0 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	RESULT 1 AL763075 LOCUS DEFINITION ACCESSION VESTONN KEYWORS SOURCE AUTHORS TITLE JOURNAL MEDLINE PUBMED REFERENCE AUTHORS TITLE JOURNAL MEDLINE PUBMED REFERENCE AUTHORS TITLE JOURNAL PUBMED COMMENT COMMENT
यय यय या या माना माना माना माना माना मान	ALTG101 LOCUS LOCUS DEFINIT ACCESSI VERGION VE
0 0 0 0 0 0	CO SO

```
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Iniversity). "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CG715094.1 GI:37742080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 BKSGCAUGGCUAAGGGA 17
AI316323.1 GI:4031590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :: |||:|||: |||||
27 TGAGCATGGCTTAGGGA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           survey sequence.
                                                                                                                                                                                                                                          Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGI:984355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zеа шаув
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CG715094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                ORGANISM
                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
VERSION
KEYWORDS
                                                                                                                               REFERENCE
                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CG715094
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                              /organism="Arabidopsis thaliana"
/mol_type="ganomic DNA"
/mol_type=ganomic DNA"
/mol_type=ganomic DNA"
/mol_type="Columbia 0"
/db_xref="taxon:3702"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="GK-032006-014864"
/clone="PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from vector pAC106 (GenBank accession number: AJ537513). The lines contain one or more T-DNA insertions. The DNA from recent (s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion.
T-DNA derived sequences were removed."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CR183540 150 DNA linear GSS 06-JUL-2004 Forward strand read from insert in 5'HPRT insertion targeting and chromosome engineering clone MHPN121h03, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryotta, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases I to 58) Adams, D.J., Biggs, P.J., Cox, A.V., Davies, R.M., van der Weyden, L., Jonkers, J., Smith, J., Plumb, R.W., Taylor, R.G., Nishijima, I., Yu, Y., Rogers, J. and Bradley, A. Dincet Submitsed (200-5FB-2004) Sanger Centre, Hinxton, Cambridgeshire, CB10 18A, UK. http://www.sanger.ac.uk/MICER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 17-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AI316323 40 bp mRNA linear EST 17-
uj99b12.yl Schiller mouse MAC13 Mus musculus cDNA clone
IMAGE:1958015 5' similar to TR:035934 035934 CLN3. ;, mRNA
  GABI'. Information on line availability can be found at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 64.0%; Score 12.8; DB 9; Best Local Similarity 75.0%; Pred. No. 7.4e+04; Matches 12; Conservative 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
64.0%; Score 12.8; DB 9;
Best Local Similarity 77.8%; Pred. No. 7.8e+04;
Matches 14; Conservative 1; Mismatches 3;
                    http://www.mpiz-koeln.mpg.de/GABI-Kat/
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CR183540
CR183540.1 GI:49962389
GSS; genome survey sequence; MICER.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .58
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="MHPN121h03"
/clone_lib="MHPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 GĠĊACĠĠAGAAĠĠĠAĊĊĊ 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 CAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25 CATGGCTATGGGATCC 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence.
AI316323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CR183540
                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 3
AI316323/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
CR183540/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
Marra, M. Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         adaptor was used on the 5' end of the cona as follows:
5'-AATTCGCACGAG-3'. The library was size-selected and
when through one round of amplification. Average insert
size is 1.7 kb, with a range from 0.4-12 kb. This library
was constructed by Dr. Martin Schiller (Johns Hopkins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CG715094 1119 - RescueMu Grid AA Zea mays genomic, genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryona; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Zea.
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="Image:1958015"
/tissue type="colon cancer"
/cell line="colon cancer cell line MAC13"
/lab host="8C0LR"
/lab host="8Chiller mouse MAC13"
/lone lib="8Chiller mouse MAC13"
/note="Vector: pBluescript SK- (Stratagene); Site_1:
/note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@lmage.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1996)
Contact: Marara M/Mouse EST Project
WashD-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Fars: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Putative full length read
vector to vector length is 631
Possible reversed clone: similarity on wrong strand
Seq primer: -40RP from Gibco
High quality sequence stop: 1.
Location/Qualifiers
1. .40
//organism="Mus musculus"
//mol_type="mRNA"
//db_xrefe"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63.0%; Score 12.6; DB 1; Length 40; 64.7%; Pred. No. 9.3e+04; ive 4; Mismatches 2; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The WashU-HHMI Mouse EST Project
```

\$

```
Laboratory Mouse DNA Resource
Laboratory Mouse DNA Resource
(http://www.jax.org/resources/documents/dnares/). The DNA
was hydrodynamically sheared by repeated passage through a
0.005 inch orifice at constant velocity. The sheared DNA
was blunt end-repaired with T4 DNA polymerase and T4
polymucleotide kinase. Adaptor oligonucleotides were
ligated to the blunt ends in high molar excess. The
adaptored DNA was purified and size-selected for a 9.5 to
10.5 kb range using preparative agarose gel
electrophoresis. Vector DNA was prepared from a derivative
of pwD42 (gi|4732114|gb|AP129072.1), a copy-number
inducible derivative of plasmid R1. The vector was ligated
with adaptors complementary to the insert adaptors and
purified. The sheared, adaptored mouse DNA was annealed to
adaptored vector DNA, and transformed into
chemically-competent E. coli XI10-Gold (Stratagene) cells
and selected for ampicillin registance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A1937668 46 bp mRNA linear EST 06-SEP-1999 wp82b01.x1 NCI CGAP Brn25 Homo sapiens cDNA clone IMAGE:2468233 3' similar to TR:Q13536 Q13536 TRANSCRIPTIONAL ACITVATOR. ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone lib="Mouse 10kb plasmid UUGCIM library"
/note="Vector: PWD42nv; Purified genomic DNA from M.
musculus C57BL/6J (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /lab_host="E. Coli strain XL10-Gold, Tl-resistant, F-"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 46)
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NAtional Cancer Institute / National Institute of Neurological
Disorders and Stroke, Brain Tumor Genome Anatomy Project
(CGAP/BEGAP), Tumor Gene Index
Unpublished (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 62.0%; Score 12.4; DB 8; Best Local Similarity 78.6%; Pred. No. 1.2e+05; Matches 11; Conservative 2; Mismatches 1;
Tel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genetics.utah.edu
                                                                                                                                                   Seg primer: CGTTGTAAAACGACGCCAGT
Class: plasmid ends
High quality sequence stop: 34.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
/clone="UUGC2M0192C06"
                                                                                                                               row: C column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI937668
AI937668.1 GI:5676538
                                                                                                 Insert Length: 10000
Plate: 0192 row: C c
                                                                                                                                                                                                                                                                                                                                                                                                                                               /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 GCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 GCATGGGTAAGGGA 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
A1937668/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone lib="lilg - RescueMu Grid AA"
/note="Organ: leaf; Vector: RescueMu (engineered from pBlueScript backbone); Site 1: BamHi, Site 2: BglII; RescueMu is a 4.9 kb modified maize Mu transposon designed to allow plasmid rescue from total genomic DNA. Mu elements insert preferentially into transcription units. For more information on RescueMu, go to the web site 'www.zamdb.iastace.edu' and follow the links for 'RescueMu.' Grid AA was grown at UC San Diego in 2002. DNA was extracted from leaf strips, double digested using BamHI and BglII, and ligated to form circular plasmids. DHIOB calls were transformed and then screened on LB plates with ampicillin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A. and Wright, D., Waiss, R., Mouse whole genome scaffolding with paired end reads from 10kb plasmid inserts
Unpublished (2000)
Contact: Robert B. Weiss
University of Utah
Rm. 308, Blomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AZ876899 34 bp DNA linear GSS 21-FEB-2001
2M0192C06F Mouse 10kb plasmid UUGCIM library Mus musculus genomic
clone UUGC2M0192C06 F, genomic survey sequence.
                                Malbot, V.
Malbot, V.
Malbot, V.
Malze genomic sequences found using engineered RescueMu transposon Unpublished (2001)
Context: Walbot,
Department of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 34)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                      855 California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2227
Ema: 650 725 8221
Emai: 60 725 8221
Emai: 60 725 8221
Very probable ligation site found so sequence was trimmed. Very probable ligation site found so sequence submitted separately.
Plate: 1119039 row: H column: 08
Class: transposon-tagged.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Zea mays"
/mol_type="genomic DNA"
/cultivar="mixed background W23/A188/B73/K55"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 63.0%; Score 12.6; DB 9; Best Local Similarity 73.3%; Pred. No. 9.8e+04; Matches 11; Conservative 3; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:4577"
/ti6sue_type="leaf"
/dev_stage="adult"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AZ876899.1 GI:13088195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 KSGCAUGGCUAAGGG 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 recentecchaece 22
                                                                                                                                                                                 Stanford University
                 (bases 1 to 56)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . . 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rm. 308, Bi
84112, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AZ876899
           REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
AZ876899
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
```

ORIGIN

ò 유

ô

Gaps

ö

Length 34; Indels

Gape

;

GSS 16-FEB-2001

```
/ General Contraction of the contraction of contraction 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Bakaryota, Metazoa, Chordata, Sciurognathi, Muridae, Murinae, Mus. 1 (Dases 1 to 26)
Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A. and Wright, D., Weiss, R.
Mouse whole genome scaffolding with paired end reads from 10kb
                                                                                                                                                                                                                                                                                                                                                                              AZ804424
2M0065C11F Mouse 10kb plasmid UUGC1M library Mus musculus genomic
                                                                                                                     3; Indels
                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2000)
Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Rm. 308, Blomedical Polymers Research Bldg., 20
84112, USA
                                                       Score 12.4; DB 9;
Pred. No. 1.2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0065 row: C column: 11
Seg primer: CGTTGTAAAACGACGCCAGT
                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .26
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 26.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
/clone="UUGC2M0065C11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AZ804424.1 GI:12956747
                                                                                                                                                                            19
                                                                                                                                                                                                                                    47 GGCCACGCCAAGGGACC 30
                                                          62.0%;
72.2%;
                                                                                                                                                                               2 KSGCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Class: plasmid ends
                              Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      plasmid inserts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSS.
                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                               AZ804424/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T 3/1; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into Library is and Eco RI sites of the modified pI773 vector. Library is normalized, and was constructed by Bento Soares and M.Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Arrayed by: Greg Lennon, Ph.D.
My Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.B. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XSOGO, C. ASSOCRATION STATES TINEAR GSS 02-FEB-2004 XSOG48 Sanger Institute Gene Trap Library pGT0lxf Mus musculus CL256773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 51)
Sanger Intitute Gene Trap Resource - SIGTR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Sanger Institute Gene Trap Resource - SIGTR Wellcome Trust Sanger Institute
Mellcome Trust Sanger Institute
Sandi: info.genetrap@sanger.ac.ub
Sequence tag generated by 5' RACE of total RNA from gene trap ES
cell line. ES cell lines harboring insertion mutation of target
gene are available upon request from Sanger Institute Gene Trap
http://www.sanger.ac.uk/PostGenomics/genetrap/
Class: Gene Trap.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/sex="Male"
/cell_type="Embryonic Stem Cell"
/clone_lib="sanger Institute Gene Trap Library pGT0lxf"
/note="Vector: pGT0lxf"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="anaplastic oligodendroglioma"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62.0%; Score 12.4; DB 1; Length 46; 64.3%; Pred. No. 1.2e+05; ive 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://www.sanger.ac.uk/PostGenomics/genetrap/
Unpublished (2003)
                                                                                                                  www-bio.llnī.gov/bbrp/image/image.html
                                                                                                                                                                            Trace considered overall poor quality
Seg primer: -40UP from Gibco
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2468233"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="129 OLA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CL256773.1 GI:41620565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :::|||:|||:
28 TTGGCATGGCTAAG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 BKSGCAUGGCUAAG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
CL256773/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                원
```

S. 2030 E., SLC, UT

Gapa

ઠે

```
fragment(8) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed."
                                                                                                                                                                                                                                                                                                                                                                                          EST 17-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSS 14-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/kstain="CHQ48.1"
/db xref="texon:591"
/clone lib="Chilcoat/Turkewitz cDNA (large fraction)"
/note="Vector: BluesGriptz SR+, Details on library
preparation can be found in Chilcoat and Turkewitz (2001)
Proc. Natl. Acad. Sci USA, 98: 8709-8713."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia; Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 23)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AZ658079 14-DEC-200 1005 plasmid UUGCIM library Mus musculus genomic clone UUGCIM0534H11 R, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Alveolata, Ciliophora, Oligohymenophorea; Hymenostomatida; Tetrahymenina; Tetrahymenidae; Tetrahymena. 1 (bases 1 to 23)
Turkewitz, A.P., Karrer, K.M., Jahn, C., Orias, E., Kirk, K.E., Frankel, J. and Klobutcher, L.
BST from Tetrahymena thermophila, strain CU428.1, growing cells Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                  BM394673 23 bp mRNA linear EST 17 50072-2-5-D08.r.1 Chilcoat/Turkewitz cDNA (large fraction) Ebrrahymena thermophila cDNA, mRNA sequence.
                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                            ch 61.0%; Score 12.2; DB 9; Length 54; l Similarity 76.5%; Pred. No. 1.6e+05; 13; Conservative 1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 12; DB 4; Length 23;
Pred. No. 1.7e+05;
5; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ...23
'organism="Tetrahymena thermophila"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Molecular Genetics and Cell Biology
University of Chicago
920 E. 58th Street, Chicago, IL 60637, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fax: 773 702 3172
Email: apturkew@midway.uchicago.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TGCGCATGGGTCCGGGCCCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tetrahymena thermophila
Tetrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM394673.1 GI:18194726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AZ658079
AZ658079.1 GI:11795225
                                                                                                                                                                                                                      4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                 26 GCAAGGCTATGGGATCC 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Turkewitz AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 60.0%;
l Similarity 55.0%;
11; Conservative !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 773 702 4374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: T3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 11; Conserv
                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BM394673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS.
                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AZ658079/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                          RESULT 10
BM394673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln. 50829. Germany This sequence has been recovered from the fit border of the T-DNA. It indicates an insertion close to or within gene At2g34400. Details on the protocols used for generation of the Sequence are described in References 1-3. The sequences are generated at the MPI Gor Plant Breeding Research in the context of the GABI-Kat project (GABI-Kat is part of the German Plant Genomics program designated 'GABI'. Information on line availability can be found at: Location/Qualifiers
                                                                                                                                                                                                                                                                                          Arabidopsis thaliana T-DNA flanking sequence GK-249D07-014444, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-rect was performed on DNA from Arabidopsis thaliana plants (TI) which were transformed with the T-DNA from vector pAC161 (Genback accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROBBO, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                  Length 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 (bases 1 to 54)
Rosso, M.G., Li, Y., Strizhov, N. and Weisshaar, B.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Arabidopsis thaliana"
/mol type="genomic DNA"
/strain="Columbia 0"
                                                  61.0%; Score 12.2; DB 8; 82.4%; Pred. No. 1.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bioinformatics 19 (11), 1441-1442 (2003) 22755829
                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:3702"
/clone="GK-249D07-01444"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                           AL940566.1 GI:24397015
GSS.
                                                                                                                                               4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                          26 GCAAGGCCCAGGGACCC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana
                                                                                                  14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Weisshaar, B.
                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12874060
                                                                                                                                                                                                                                                                                                                                                                                          AL940566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14682050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4756321
                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                 RESULT 9
AL940566
                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
```

ô

Gaps

AUTHORS

JOURNAL

TITLE

FEATURES

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.
E 1 (bases 1 to 29)
E 1 (bases 1 to 29)
E 2 (bases 1 to 20)
E 3 (bases 1 to 20)
E 3 (bases 1 to 20)
E 4 (bases 1 to 20)
E 5 (bases 1 to 20)
E 6 (bases 1 to 20)
E 7 (bases 1 to 20)
E 8 (bases 1 to 20)
E 9 (bases 1 to 20)
E 9 (bases 2 to 20)
E 1 (bases 2 to 20)
E 2 (bases 2 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/brain="CTG428.1"
/db xref="texon:591"
/clone lib="Chilcoat/Turkewitz cDNA (large fraction)"
/note="Vector: BlueScriptz SK+; Details on library
preparation can be found in Chilcoat and Turkewitz (2001)
Proc. Natl. Acad. Sci USA, 98: 8709-8713."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AZ820217
2M0092I13F Mouse 10kb plasmid UUGC1M library Mus musculus genomic
                             Turkewitz,A.P., Karrer,K.M., Jahn,C., Orias,E., Kirk,K.E.,
Frankel,J. and Klobutcher,L.
EST from Tetrahymena thermophila, strain CU428.1, growing cells
Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.0%; Score 12; DB 4; Length 27; 55.0%; Pred. No. 1.8e+05; ive 5; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone UUGC2M0092I13 F, genomic survey sequence.
                                                                                                                                                                           Contact: Turkewitz AP
Molecular Genetics and Cell Biology
University of Chicago
920 E. 58th Street, Chicago, IL 60637, USA
Tel: 773 702 4374
Fax: 773 702 3172
Email: apturkew@midway.uchicago.edu
Seq primer: T3.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l. .27
/organism="Tetrahymena thermophila"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0092 row: I column: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: CGTTGTAAAACGACGGCCAGT
Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 29.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="UUGC2M0092113"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AZ820217.1 GI:12990125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match
Best Local Similarity 55.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÚSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AZ820217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84112,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
AZ820217/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                           TITLE
JOURNAL
                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (http://www.jax.org/resources/documents/dnares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polymucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gelectrophoresis. Vector DNA was prepared from a derivative of pwM92 (gilly 4732114 [gb] AR129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coll X110-Gold (Stratagene) cells and selected for ampicillin resistance."
Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A. and Wright, D., Weiss, R., Mouse whole genome scaffolding with paired end reads from 10kb plasmid inserts
Unpublished (2000)
Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah Genome Center
Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT 84112, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 17-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="E. Coli strain XL10-Gold, Tl-resistant, F-"
/clone lib="Mouse 10kb plasmid UUGCIM library"
/note="Vector: PWD42nv; Purified genomic DNA from M.
musculus C57BL/6J (male) was obtained from the Jackson
Laboratory Mouse DNA Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetrahymena thermophila
Bukaryota; Alveolata; Ciliophora; Oligohymenophorea;
Hymenostomatida; Tetrahymenina; Tetrahymenidae; Tetrahymena.
I (bases I to 27)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM395243 27 bp mRNA linear EST 1750072-2-8-B11.r.1 Chilcoat/Turkewitz cDNA (large fraction)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60.0%; Score 12; DB 8; Length 23; S5.0%; Pred. No. 1.7e+05; tive 5; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0534 row: H column: 11
Seq primer: CACACAGGAACAGGTATGACC
Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone="UUGC1M0534H11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22 CTGGCATAGATCAGGGACGC 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM395243.1 GI:18195296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      retrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
```

DEFINITION

ACCESSION

KEYWORDS

RESULT 12 BM395243

Matches

ઠે g

ORIGIN

ORGANISM

REFERENCE

ö

Gaps

ö

GSS 20-FEB-2001

Gaps

ö

Length 34;

ua-09-699-667e-66.giz.rst

```
18 4 (Bases 1 to 36)
19 1.Y., Rosso, M.G., Strizhov, N. and Weisshaar, B.

19 1.Y. Rosso, M.G., Strizhov, N. and Weisshaar, B.

10 1.Y., Rosso, M.G., Strizhov, N. and Weisshaar, B.

10 1.MAR-2004) Weisshaar B., Max-Planck-Institut fuer

11 Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer

12 2uechtungsferschung, Carl-von-Linne-Weg 10, Koolin, 50829, Germany

11 Indicates an insertion close to or within gene At5g24260.

12 Indicates an insertion close to or within gene At5g24260.

13 Details on the protocols used for generation of the sequence are described in References 1-3. The sequences are generated at the MPI for Plant Breeding Research in the context of the GABI-Kat project

12 GABI-Kat is part of the German Plant Genomics program designated

13 MARI-Kat is part of the German Plant Genomics program designated

14 GABI-V. MWW. mpiz-koeln. mpg.de/GABI-Kat/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots,
rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis.
each of which contains one or more TDNA insertion elements. The resultant fragment for each line was directly sequenced to determine the genomic sequence at the site of insertion. Details of the protocols used can be found at http://signal.salk.edu/tdna_protocols.html"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li,Y., Robbo,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GAB1-Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="GK-184G03-013649"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL771940 36 bp DNA linear GSS 01-APR
Arabidopsis thaliana T-DNA flanking sequence GK-184G03-013649,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rosso, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                                                                                                                                                              60.0%; Score 12; DB 8; Length 34; larity 71.4%; Pred. No. 1.8e+05; Conservative 3; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Arabidopsis thaliana"
/mol type="genomic DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bioinformatics 19 (11), 1441-1442 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    db xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL771940.1 GI:21534142
                                                                                                                                                                                                                                                                                                                  3 SGCAUGGCUAAGGG 16
                                                                                                                                                                                                                                                                                                                                                                           10 GĠĊATĠĠĊTAACĠĠ 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Weisshaar,B.
                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Weisshaar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4756321
                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSS
                                                                                                                                                                                                    Query Match
Best Local S:
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL771940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                           DRIGIN
                                                                                                                                                          (http://www.jax.org/resources/documents/dnares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polymucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pwalot (gilly 4732114 [gb] AR129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coll X110-Gold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BH789679 15.50.n Arabidopsis thaliana TDNA insertion lines Arabidopsis thaliana genomic clone SALK_04456.15.50.n, genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alongo,J.M., Leisse,T.J., Barajas,P., Chen,H., Cheuk,R.,
Gadrinab,C., Jeske,A., Karnes,M., Kim,C.J., Parker,H., Prednis,L.,
Shinn,P., Zimmerman,J and Ecker,J.R.
A Sequence-Indexed Library of Insertion Mutations in the
                          /lab_host="B. Coli strain XLIO-Gold, T1-resistant, F-" /clone lib="Mouse 10kb plasmid UUGCIM library" /note="Vector: PWD42nv; Purified genomic DNA from M. musculus C57BL/6J (male) was obtained from the Jackson Laboratory Mouse DNA Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="SALK 044456.15.50.n"
/clone lib="Arabidopsis thaliana TDNA insertion lines"
/note="PCR was performed on Arabidopsis thaliana lines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      this is single pass sequence recovered from the left border of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Joseph R. Ecker
Salk Institute Genomic Analysis Laboratory (SIGNAL)
The Salk Institute for Biological Studies
10010 N. Torrey Pines Road, La Jolla, CA 92037, USA
Tel: 858 453 4100 x1752
Fax: 858 558 6379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60.0%; Score 12; DB 8; Length 29; 60.0%; Pred. No. 1.8e+05; ive 4; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
/ecotype="Col-0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 TTCGCATAGGAGGGACCC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BH789679.1 GI:19882777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ecker@salk.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TDNA tagged
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 60.0
Matches 12, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                survey sequence.
BH789679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TDNA.
Class:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
BH789679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

ઠે 셤

```
/ecotype="Col-0"
//coe="PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from vector pAcific (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment (s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed."
```

ORIGIN

Query Match 60.0%; Score 12; DB 9; Length 36; Best Local Similarity 60.0%; Pred. No. 1.9e+05; Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

1 BKSGCAUGGCUAAGGGACCC 20 :::||| ||-|| ||-|| 17 TTGGCACCGCTATGGGATCC 36

ò

Db 17 TTGCCACCGCTATGGGATCC 36

Search completed: March 15, 2005, 20:38:26 Job time : 813.561 secs AR368219 Sequence
CQ758677 Sequence
AR231187 Sequence
AR2310614 Sequence
AR237698 Sequence
AR374088 Sequence
AR37698 Sequence
BD078782 Recombine
BD085609 Recombine
A12323 oligonucleo
A12259 cligonucleo
A12597 oligonucleo
A12597 oligonucleo
A12597 oligonucleo
CQ006157 Sequence
CQ06157 Sequence
CQ16417 Sequence
CQ16417 Sequence
CQ16417 Sequence
CQ16452 Sequence
AR123049 Sequence
AR123049 Sequence
AR121066 Sequence
AR121066 Sequence
AR121066 Sequence
AR121066 Sequence
AR121066 Sequence
AR121066 Sequence

Scoring table:

Searched:

8 08 08

Minimum I Maximum I

Database

Title: Perfect score:

Sequence:

OM nucleic

Run on:

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 46 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers

1. 57

/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 57; DB 6; Length 57; 71.9%; Pred. No. 0.0016; ive 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                     RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                                                                                                                      other sequences; artificial sequences
                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                 57 bp
Sequence 46 from Patent WO9955856.
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012282 57 bp
Sequence 44 from Patent WO9955856.
AX012282 GI:9998343
                                             AR237698
AR353208
BD078782
BD085609
                                                                                                                                                    CQ545417
CQ004477
CQ004552
AR291353
BD021854
AR123049
CQ007548
AR125066
AR134278
                                                                                                                                  I41391
AX107690
                                                                                                                          20006157
                                                                                    A12323
A12324
A12596
A12597
                                                                                                                                                                                                                                                                                                                                                  AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                    synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0
Best Local Similarity 71.9*
Matches 41; Conservative
440.7
440.7
440.4
440.6
39.3
39.3
                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                  RESULT 1
AX012284
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
AX012282
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX012284 Sequence
AX012282 Sequence
AX012283 Sequence
AX012285 Sequence
AX012286 Sequence
AX012286 Sequence
AX012289 Sequence
AX012290 Sequence
AX012290 Sequence
AX012291 Sequence
AX012291 Sequence
AX012291 Sequence
AX012292 Sequence
                                                                March 15, 2005, 12:35:18 ; Search time 1124 Seconds (without alignments) 2457.248 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                           ggguccaccuccucgcggun.......ggggcauggcuaagggaccc
          GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                       4708233 segs, 24227607955 residues
                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                               nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012282
AX012283
AX012286
AX012286
AX012287
AX012289
AX012290
AX012290
AX012291
AX021007
AR04342
AR0434342
AR0623373
AR183396
AR1833396
                                                                                                                                            IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                   US-09-699-667E-62
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03
                                                                                                                                                                                                                                                                                       Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 60
```

PAT 06-SEP-2000

ô

ö

57

PAT 06-SEP-2000

synthetic construct synthetic construct

DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

AR043462 Sequence AR062337 Sequence AR062377 Sequence AR183795 Sequence AR183835 Sequence AR368179 Sequence

Score

Result õ

ö

PAT 06-SEP-2000

ð

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERRROCKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGTCCACCTCCTCGCGGTCCGCCCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNUGGCCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 83.2%; Score 47.4; DB 6; Length 57; Best Local Similarity 64.9%; Pred. No. 0.57; Matches 37; Conservative 14; Mismatches 6; Indels
                                                                                                                                                        Length 57;
                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                      Query Match 83.2%; Score 47.4; DB 6; Best Local Similarity 64.9%; Pred. No. 0.57; Matches 37; Conservative 14; Mismatches 6;
                1. 57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon.32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_type="taxon:32630"
/noTea"synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57 bp
Sequence 49 from Patent WO9955856.
AX012287
                                                                                                                                                                                                                                                                                                                                                                 Sequence 48 from Patent WO9955856.
  location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                             AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
ORGANISM
                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
AX012287
                                                                                                                                                                                                                                                                                                                                   RESULT 5
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                         SDOOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Nucleic acid enzyme for rna cleavage
Patent: WO 9958956-A 45 04-NOV-1999;
ANANVORANCH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: Wo 995586-A 47 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Batent: W0 995586-A 44 04-NOV-1999;

ANANVORANCH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGGCTTCGCATGGCGACCC 57
                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                   .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 83.2%; Score 47.4; DB 6; Length 57; Best Local Similarity 64.9%; Pred. No. 0.57; Matches 37; Conservative 14; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                            6; Length 57;
                                                                                                                                                                                                                                                                                                                                   6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                      1. .57
/organism="synthetic construct"
/or_Lype="unassigned RNA"
/db_xref="texon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                        ch 83.2%; Score 47.4; DB 1 Similarity 64.9%; Pred. No. 0.57; 37; Conservative 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       other sequences; artificial sequences.
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 47 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012283 57 bp
Sequence 45 from Patent W09958856.
AX012283 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
                        REFERENCE
                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
```

ô

Gaps

.,

PAT 06-SEP-2000

ð

57

DEFINITION ACCESSION VERSION

RESULT 7 AX012288 LOCUS

a

ORGANISM

CEYWORDS

SOURCE

TITLE JOURNAL AUTHORS REFERENCE

source

ORIGIN

FEATURES

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 05-DEC-1998
                                                                                         PAT 06-SEP-2000
                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 52 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERRENOKE (CA)

1. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 53 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROCKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGCCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGTCCACCTCCTCGCGGTCCGATCTGGGCATGCGGCTTCGCATGGCTAAGGACCC
1 GGGTCCACCTCCCCCGGGTCCGAGCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 37;
                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 59.6%; Score 34; DB 6; Le
Best Local Similarity 64.7%; Pred. No. 2.3e+03;
Matches 22; Conservative 12; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
9
                                                                                                                                                                                                                                                                                                                                                                                        construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match

83.2%; Score 47.4; DB

Best Local Similarity 64.9%; Pred. No. 0.57;

Matches 37; Conservative 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences.
                                                                                                                                                                                                                   other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGTCCACCTCCTCGGGTCCGACCTGGGCATGC
                                                                                                                                                                                                                                                                                                                                                                                    /organism="synthetic const:
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR021007 52 bp | Sequence 40 from patent US 5789245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37 bp
Sequence 53 from Patent WO9955856.
AX012291
                                                                                     Sequence 52 from Patent WO9955856.
AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .37
/organism="synthetic
                                                                                                                                          AX012290.1 GI:9998351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012291.1 GI:9998352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct
synthetic construct
                                                                                                                                                                                    synthetic construct
                                                                                                                                                                                                   synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR021007
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                            DEFINITION
                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
AX012291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
                                                                      AX012290
LOCUS
                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                      PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Barent: WO 995586-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: WO 995856-A 51 04-NOV-1999;
PARANVORANCH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83.2%; Score 47.4; DB 6; Length 57; 64.9%; Pred. No. 0.57; cive 14; Mismatches 6; Indels
                    57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 57;
                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Indels
                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                    Length
                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="reaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/mol type="unassigned RNA"
/mol xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences.
                    %; Score 47.4; DB
%; Pred. No. 0.57;
14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83.2%; Score 47.4; DB 64.9%; Pred. No. 0.57;
                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37; Conservative 14; Mismatches
                                                                                                                                                                                                                   Sequence 50 from Patent WO9955856.
AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 51 from Patent WO9955856.
AX012289
AX012289.1 GI:9998350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                            AX012288.1 GI:9998349
                    83.2%;
64.9%;
                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 64.9 Matches 37; Conservative
                                                         37; Conservative
                    Query Match
Best Local Similarity
Matches 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 37; Conserv
```

ö

57

ö

· ·

Query Match

ORIGIN

ORGANISM

REFERENCE AUTHORS

KEYWORDS SOURCE

TITLE JOURNAL

FEATURES

DEFINITION ACCESSION VERSION

RESULT 8 AX012289 LOCUS

Gaps

ACCESSION

KEYWORDS SOURCE

REFERENCE AUTHORS

ORIGIN

```
PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 52)
Dubensky T.W. Jr., Polo,J.M., Ibanez,C.E., Chang,S.M.W.,
Jolly,D.J., Driver,D.A. and Belli,B.A.
Alphavirus vector constructs
Patent: US 5843723-A 40 01-DEC-1998;
                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 5814482-A 80 29-SEP-1998;
                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 52;
                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                         51.6%; Score 29.4; DB 6; Length 58.1%; Pred. No. 3.5e+04; ive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.6%; Score 29.4; DB 6; 58.1%; Pred. No. 3.5e+04; tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51.6%; Score 29.4; DB 6;
58.1%; Pred. No. 3.5e+04;
iive 12; Mismatches 1;
                                                                                                                          1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52 bp Sequence 40 from patent US 5843723. AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="unassigned DNA"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                        32 pp
Sequence 80 from patent US 5814482.
AR043462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Search completed: March 15, 2005, 18:04:52
                                                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .52
/organism="unknown"
                                                                                                                                                                                                                                                               AR043462.1 GI:5964470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR062337.1 GI:5990028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 58.1%
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18; Conservative
                                                                          18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                             Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassified.
                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Job time : 1125 secs
                                                                                                                                                                                                                   AR043462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                          Matches
                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                    RESULT 14
AR043462
                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
Unclassified.
1 (bases 1 to 52)
1 (bases 1 to 52)
2 Dubensky, T.W. Jr., Polo,J.M., Ibanez,C.E., Chang,S.M.W., Jolly,D.J.
and Driver,D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 80 04-AUG-1998;
Location/Qualifiers
                                                                     Unclassified.

1 (bases 1 to 52)

Dubensky.T.W. Jr., Polo,J.M., Ibanez,C.E., Chang,S.M.W., Jolly,D.J.
and Driver,D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 40 04-AUG-1998;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 05-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 581482-A 40 29-SEP-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                  ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                  Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                  51.6%; Score 29.4; DB 6; 58.1%; Pred. No. 3.5e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;; Score 29.4; DB 6;
;; Pred. No. 3.5e+04;
12; Mismatches 1
                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                               12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                 /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 40 from patent US 5814482.
AR043422
                                                                                                                                                                                                                                                                                                                                                                                                                                        AR021047 52 bp
Sequence 80 from patent US 5789245.
AR021047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .52
/organism="unknown"
AR021007
AR021007.1 GI:3975622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR021047.1 GI:3975662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR043422.1 GI:5964430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51.6%;
58.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18; Conservative
                                                                                                                                                                                                                                                                                                18; Conservative
                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 18; Conserva'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                             Unknown.
                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                           ORGANISM
                                                                                                                                     TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
AR043422
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                  Matches
```

JOURNAL

ORIGIN

TITLE

REFERENCE AUTHORS

RESULT 12

g

AR021047 LOCUS

ö

Сарв

ö

Gaps

REFERENCE

THIS PAGE BLANK (USPTO)

March 15, 2005, 10:06:47 ; Search time 868.86 Seconds (without alignments) 876.189 Million cell updates/sec GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd. nucleic search, using sw model OM nucleic Run on:

US-09-699-667E-66 20

1 bksgcauggcuaagggaccc 20 IDENTITY\_NUCDX Gapop 10.0 , Gapext 1.0 Title: Perfect score: Scoring table: Sequence:

34239544 seqs, 19032134700 residues Searched:

68479088 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

9b est1: 9b htc: 9b htc: 9b est4: 9b est6: 9b gs81: 9b gs81: EST:\* ............ Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

AV027102 AV027102 CE236428 tigr-gss-A1481854 vj74611.x A1481895 gb20g03.y BG022212 df10c01.y BG251946 df10c01.y BR241762 BX847762 CNS01110 AGENCOURT CC99554 GUAHIZ5TV BZ562536 paca2-164 CC99554 GUAHIZ5TV BZ562536 paca2-164 CR99154 tigr-gss-BB518409 BB518409 N41730 yw87F03.x1 CE806241 tigr-gss-RA584508 CR884508 AA009885 ze83804.x B60215 CIT-HSP-200 2M0143C17 2M041L08 EST229865 603789355 AV027102 tigr-gss-vj74d11.x gb20g03.y GE10C01.y GF10C01.y BB152189 BB152189 Description AI233177 BU361862 AZ844319 A1233177 BU361862 AV027102 CE236428 A1481854 AW699095 BG023212 BZ261544 BF231936 BX847762 CNS01110 CC995546 BZ562536 CE795156 N41730 CE806241 CR584508 AA009885 B60215 AZ844319 AZ791672 BB152189 DB Length Query Match Score 15.8 15.8 15.8 15.8 15.8 15.8 23 23 24 24 Result 000 000

AI368409 qy08a12.x

AI368409

AZ270039 RPCI-23-1	CL609413 CH240_176		AQ545150 CITBI-E1-		BQ632754 il27e07.y		CC262353 CH261-167	CE821267 tigr-gss-	AZ098809 RPCI-23-1	BH101439 RPCI-24-3	AZ901413 RPCI-24-1	AA930487 vz44g06.r	BE751983 204250 MA	CK428113 laj10g07.	AQ375513 RPCI-11-1	CV432461 RT0762 Ch	CN991756 68841 125	CN988763 64622_125	CR277771 Forward B	BI329017 602980410
AZ270039	CL609413	BH090915	AQ545150	BM263519	BQ632754	CK824498	CC262353	CE821267	AZ098809	BH101439	AZ901413	AA930487	BE751983	CK428113	AQ375513	CV432461	CN991756	CN988763	CR277771	BI329017
8	σ	œ	œ	4	Ŋ	7	8	σ	8	æ	80	Н	N	7	œ	7	7	7	σ	4
462	498	519	525	577	578	617	1104	198	359	471	492	529	553	589	607	623	640	661	709	757
79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
25	c 26	c 27	28	c 29	30	c 31	32	33	34	c 35	36	37	ი 38	39	c 40	41	42	43	C 44	c 45

## ALIGNMENTS

```
Plate: 0041 row: L column: 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
AZ791672/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONTRIBUTED TO Prepare mouse tissues. 1st strain of the contributed to prepare mouse tissues. 1st strain of the a primer [5, mouse tissues. 1st strain of the a primer [5, mouse tissues. 1st strain of the a primer [5, mouse tissues. 1st strain of the asset of the as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Wersity of Utah
Wan. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
84112, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AZ844319 2M0143C17R Mouse 10kb plasmid UUGC1M library Mus musculus genomic clone UUGC2M0143C17 R, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (240)

Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C.,

Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T.,

Niderhausern, A. and Wright, D., Weiss, R., Tingey, A., von

Niderhausern, A. and Wright, D., Weiss, R.,

Plasmid inserts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Site 1: Sal1; Site_2: BamH1; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone_lib="RIKEN full-length enriched, 16 days neonate
High-efficiency full-length cDNA cloning. Methods Enzymol. 303, 19-44 (1999)
Please visit our web site (http://genome.rtc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84.0%; Score 16.8; DB 2;
70.0%; Pred. No. 8.8e+02;
tive 5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                        tissue_type="thymus"
dev_stage="16 days neonate"
lab_host="DH108"
                                                                                                                                                                                                                                /organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
/clone="A130004F20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             row: C column: 17
                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54 CGGGAATGGCTAAGGGACCC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AZ844319.1 GI:13014227
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 70.0
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: 0143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AZ844319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AZ844319/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
```

ò 셤

```
(http://www.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.nduer.bra.ndue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)

Mus musculus

Eukaryota; Matazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Musmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 514)

1 (bases 1 to 514)

1 (bases 1 to 514)

2 Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C.,

1 Islam, H., Longacre, S., Mahmoud, M., Menen, E., Pedersen, T.,

Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von

Niederhausern, A. and Wright, D., Weiss, R.

Mouse whole genome scaffolding with paired end reads from 10kb

plasmid inserts

Unpublished (2000)

Locatic Robert B. Weiss

University of Utah

Duniversity of Utah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 B., SLC, UT
84112, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSS 16-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AZ791672
2M0041L08R Mouse 10kb plasmid UUGCIM library Mus musculus genomic clone UUGC2M0041L08 R, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /lab_host="E. Coli strain XL10-Gold, T1-resistant, F-"
/clone l1b="Mouse 10kb plasmid UUGCNI library"
/note="Voctor: PWDAny, Purified genomic DNA from M.
musculus C57BL/6J (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84.0%; Score 16.8; DB 8; Length 240; 70.0%; Pred. No. 8.9e+02; ive 5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Laboratory Mouse DNA Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Seq primer: CACACAGGAAACAGCTATGACC
                                                                                                                                                                                                                                                      /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                   'db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="UUGC2M0143C17"
                                               Class: plasmid ends
High quality sequence stop: 2
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GGGCATGCTCAGGGACCC 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AZ791672
AZ791672.1 GI:12934808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 70.0
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 801 585 5606
Fax: 801 585 7177
```

```
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                    AI233177 557 bp mRNA linear EST 31-JAN-1999 EST229865 Normalized rat kidney, Bento Soares Rattus sp. cDNA clone RKICL81 3' end, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                    Jab_host="E. Coli strain XLIO-Gold, Tl-resistant, F-"
/clone lib="Mouse 10kb plasmid UUGCIM library"
/note="Vector: PWD42nv; Purified genomic DNA from M.
musculus G7BL/6J (male) was obtained from the Jackson
Laboratory Mouse DNA Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 557)
Lee, N.H., Glodek, A., Chandra, I., Mason, T.M., Quackenbush, J.,
Kerlavage, A.R. and Adams, M.D.
Rat Genome Project: Generation of a Rat EST (REST) Catalog & Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84.0%; Score 16.8; DB 8; Length 514; 70.0%; Pred. No. 9.9e+02; ive 5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1998)
Contact: Lee, NH
The Institute for Genomic Research
9712, Medical Center Drive, Rockville, MD 20850, USA
7121: (301)-838-3229
Fax: (301)-838-0208
Email: nhlee@tigr.org
Seg primer: CACACAGGAAACAGCTATGACC
Class: plasmid ends
High quality sequence stop: 514.
                                                                                   /organism="Mus musculus"
                                                                                                   /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Rattus sp."
/mol_type="mRNA"
                                                                                                                                     xref="taxon:10090"
                                                                                                                                                     /clone="UUGC2M0041L08"
                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322 GGGCATGGCTCAGGGACCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AI233177.1 GI:3817057
                                                                                                                                                                        /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seq primer: M13-21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI233177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
AI233177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         윱
```

```
/done liber "GSEQCHN72"
//note="Crgan: brain; Vector: pBluescript II KS(+); Site_1:
RCOR1; Site_2: Not!; This normalized library was
CONStructed from 1 million independent clones. CDNA
synthesis was initiated using an oligo(dT) primer, using
methylated C in the first strand synthesis reaction.
Following this first strand strands spected with
ECORI, size-selected, and cloned into the NotI and ECORI
COMPATIBLE SITES of a custom modified MCS of the
pBluescript (KS+) vector. The library was normalized in 2
rounds using conditions adapted from Soares et al., PNAS
(1994) 91: 9228-9232 and Bonaldo et al., Genome Research 6
(1996): 791, except that a significantly longer
reannealing hybridization was used."
                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BU361862 916 bp mRNA linear EST 28-NOV-2002
603789355F1 CSEQCHN72 Gallus gallus cDNA clone ChEST750m14 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gallus gallus (chicken)

Gallus gallus

Gallus gallus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Archosauria; Aves; Neognathae; Galliformes; Phasianidae;

Phasianinae; Gallus.

1 (bases 1 to 916)

Boardman, P.B., Sanz-Ezquerro, J., Overton, I.M., Burt, D.W., Bosch, E. Fong, W.T., Tickle, C., Brown, W.R.A., Wilson, S.A. and Hubbard, S.J.

A Comprehensive Collection of Chicken cDNAs

Curr. Biol. 12 (22), 1965-1969 (2002)
/db_xref="ATCC (inhost):2040225"
/db_xref="taxon:10118"
/clone="RKICLS1"
/clone="RKICLS1"
/clone lib="Normalized rat kidney, Bento Soares"
/note="Grgan: kidney; Vector: pT7T3Pac; Site_1: BcoRI; Site_2: Not!"
                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Department of Biomolecular Sciences
University of Manchester Institute of Science and Technology
                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                              Score 16.8; DB 1; Length 557; Pred. No. 1e+03;
                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                     5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/strain="Compton_Line_151"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PO Box 88, Manchester, M60 10D, UK Tel: 01612009930
Fax: 01612360409
Email: Simon. Hubbard@umist.ac.uk. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Gallus gallus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="cerebrum"
/dev_stage="adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9031"
/clone="ChEST750m14"
                                                                                                                                                                                                                                                                                                                                                                             286 GGGCATGGCTCAGGGACCC 305
                                                                                                                                                                                                                                                                                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BU361862.1 GI:25869863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Simon Hubbard
                                                                                                                                                                                                                              84.0%;
                                                                                                                                                                                                                                                                                     14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . . 916
                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seguence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BU361862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12445392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22335534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
BU361862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
```

```
CE236428.1 GI:35392186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI481854
AI481854.1 GI:4375080
                                   Canis familiaris (dog)
Canis familiaris
                                                                                                                                                                                                                                                                                                                                                                                        Class: shotgun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
                                                                                                                                                                                                                                        14512627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                      ORGANISM
                                                                                                                                                                               TITLE
JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
AI481854
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                             Mammalia, Eucheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. (carninai, Eucheria, Rodentia, Sciurognathi, Murinae, Mus. (carninai, S.), Shibata, K., Ozawa, Y., Konno, H., Itoh, M., Aizawa, K., Akahira, S., Akiyama, J., Fukuda, S., Fukuda, Y., Funayama, T., Rawai, J., Kikuchi, M., Kojima, Y., Matsuyama, T., Niiteuma, H., Oda, H., Owa, C., Sato, K., Shibata, Y., Shigemoto, Y., Shiraki, T., Sogabe, Y., Suzuki, H., Suzuki, H., Tateno, M., Tomaru, Y., Yoshino, M., Muramatsu, M., Okazaki, Y. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: genome-resertc.riken.go.jp
Thermostabilization and thermoactivation of thermolabile enzymes by
trehalose and its application for the synthesis of full length cDNA
(Proc. Natl. Acad. Sci. U.S.A. 95(2):520-524 (1998))
Transcriptional sequencing: A method for DNA sequencing using RNA
polymerase (Proc. Natl. Acad. Sci. U.S.A. 95(7):3455-3460 (1998))
Please visit our web site (http://genome.rtc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327 bp DNA linear GSS 25-SEP-2003
tigr-gss-dog-17000333390000 Dog Library Canis familiaris genomic,
genomic survey sequence.
CE236428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                       ö
                                                                                                                                                                                                  AV027102 AUG-1999 AV027102 Mus musculus adult C57BL/6J liver Mus musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                       Gaps
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="liver"
/dev_stage="adult"
/clone_lib="Mus musculus adult_C57BL/6J liver"
Length 916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80.0%; Score 16; DB 1; Length 257; 77.8%; Pred. No. 2.3e+03;
Score 16.4; DB 5; Length 9
Pred. No. 1.7e+03;
5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="1300004P23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                          .300004P23, mRNA sequence.
                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Chie Owa
Genome Science Laboratory
                                                                                                1 BKSGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AV027102.1 GI:4806712
 ch 82.0%;
1 Similarity 72.2%;
13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 81-298-36-9145
Fax: 81-298-36-9098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .257
                                                                                                                                                                                                                                                                                                                                     Mus musculus
   Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIKEN
                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
CE236428/c
                                                                                                                                                                                   AV027102/c
                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                      Locus
                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
Contact: Kirkness EF
The Institute for Genomic Research
Department of Eukaryotic Genomics, TIGR, 9712 Medical Center Drive,
Rockville, MD 20850, USA
Tel: 301-838-0200
Fax: 301-838-0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AI481854 Solter mouse blastocyst B1 Mus musculus CDNA clone IMAGE:934773 3' similar to SW:DHAX_HUMAN P49419 ANTIQUITIN ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
Eukaryotz, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mamalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (Dases 1 to 512)
Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T.,
Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y.,
Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, M., Schurk, R.,
Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R.,
The WashU-NCI Mouse EST Project 1999
Unpublished (1999)
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae, Canis.
1 (bases 1 to 327)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGI:539693
This clone was previously sequenced on the 5' end only, this new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                         1 (bases 1 to 327)
Kirkness, B.F., Bafna, V., Halpern, A.L., Levy, S., Remington, K.,
Rusch, D.B., Delcher, A.L., Pop, M., Wang, W., Fraser, C.M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9615"
/clone lib="hog Library"
/note="Site l: BstXI; Libraries were prepared from
periphexal Blood"
                                                                                                                                                                                                       The dog genome: survey sequencing and comparative analysis
Science 301 (5641), 1898-1903 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 80.0%; Score 16; DB 9; Length 327; Best Local Similarity 77.8%; Pred. No. 2.4e+03; Matches 14; Conservative 3; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'organism="Canis familiaris"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="genomic DNA"
/strain="Standard Poodle"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: ekirknes@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :|||:|||: |||||||
159 GGCATGGCTGAGGGACCC 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 SGCAUGGCUAAGGGACCC 20
```

```
tissue_type="protonemata: 7 day old tissue auxin treated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :|||:||| ||||||||
123 GGCATGGCAAAGGGACCC 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG023212
BG023212.1 GI:12479291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
BG023212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: est@wateon.wustl.edu
Libraries were constructed by Dr. Stavros Bashiardes as part of the
Physcomitrella EST program (PEP) at the Univ. of Leeds (UK) and
Washington Univ. in St. Louis (USA) DNA sequencing by: Washington
University Genome Sequencing Center For information on obtaining a
clone please contact: Celia Knight (c.d.knight@leeds.ac.uk)
Seq primer: -40RP from Glaco
High quality sequence stop: 417.
                                                                                                                                                                                                                                                                                                                                                                                                                                       loned into the Notl/Sall sites of a pSPORT vector (Life schnologies). Two different size selections: B1 (larger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 18-APR-2000
                                                                                                                                                                                                                                                                                                                   /clone lib="Knowles Solter mouse blastocyst B1"
/note="Organ: embryo; Vector: pSPORT; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally from mRNA prepared
from 800 blastocysts. Primer: Sal1(dT):
5'-CGGTCGACCGTCGTTTTTTTTTTTTTT3'. cDNAs were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW699095

gb20g03.yl Moss EST library PPN Physcomitrella patens CDNA clone
PPE SOURCE_ID:PPN111205 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Bryophyta; Bryopsida; Funariidae; Funariales; Funariaceae; Physcomitrella. (bases 1 to 534)
Quatrano, R., Bashiardes, S., Cove, D., Cuming, A., Knight, C., Clifton, S., Marra, M., Hiller, L., Pape, D., Martin, J., Wylie, T., Swaller, T., Steptoe, M., Gibbons, M., Harvey, N., Fitter, E., Leds/Mash U Moss EST Project
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Ralph Quarrano
Leeds/Wash U Moss EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Fel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
data is from the 3' end
Possible reversed clone: similarity on wrong strand
Seg primer: Primer name ambiguous
High quality sequence stop: 77.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 16; DB 1; Length 512; Pred. No. 2.5e+03; 3; Mismatches 1; Indels
                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="IWAGE:334773"
/tissuc_type="blastocyst"
/dev_stage="embryo (pre-implantation)"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Physcomitrella patens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="PEP_SOURCE_ID:PPN111205"
                                                                                                                                                              /mol_type="mRNA"
/strain="C57BL/6J x DBA/2J F1"
                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:3218"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Technologies). The inserts) and B3."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW699095.1 GI:7582931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 77.8%;
Matches 14; Conservative 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Physcomitrella patens
Physcomitrella patens
                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
AW699095
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
```

ઠે 셤

```
/lab.most="bliba"
//lab.most="bliba"
//lab.most="bliba"
//lone lib="Moss EST library PPN"
//note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2:
Xhoi; Construction of the cDNA synthesis kit'. CDNA was constructed using an oligo dT primer/linker that contains a XhoI site within it. Pollowing ds cDNA synthesis,
EcoRI adapters were ligated to the blunt ends and sample was digested with Khoi. The result is cDNA with an EcoRI sticky end on one side and a XhoI sticky end on the other. This cDNA was ligated directionally in UnizbR arms. The vector is designed containing the pBluescript sequence as well as lambda DNA and cDNA is cloned within this pBluescript sequence. The vector was strone in XLIBlue MRF' cells and amplified. The library was grown in XLIBlue MRF' cells and amplified. The library was scaled by mass excised and circularises it as single stranded plasmids that are then packaged (by helper phage) and secreted out of that are then packaged (by helper phage) and secreted out of the host cell as phagemids. SOLR cells were transformed with phagemids and the library was plated out on LB-amp plates to select for transformants. Approximately
1,000,000 colonies were grown and recovered. The double stranded plasmid library was recovered. The double stranded plasmid library was recovered by using Quiagen Midi prep kit. 2 micro grams of each library were used to transform DH10B cells by electroporation."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Buteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopua; Xenopua.

(In pases 1 to 557)

(Ilifton, S., Johnson, S.L., Blumberg, B., Song, J., Hillier, L., Pape, D., Martin, J., Wylie, T., Underwood, K., Theising, B., Bowere, Y., Person, B., Gibbons, M., Harvey, N., Ritter, E., Jackson, Y., McCann, R., Washu Xenopus EST project, 1999

Unpublished (1999)

Other ESTS: dflocol.xl

Contact: Sandy Clifton, Ph. D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Library constructed by N. Garrett, E. ellefroid, and A.M. Zorn (Wellcome/CRC Institute). DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: Xenopus clones from this library are available through the I.M.A.G.E. Consortium/LLNL at: info@image.llnl.gov Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG023212 EST 24-JAN-2001 df10c01.yl Wellcome CRC pRN3 St13 17 egg animal cap Xenopus laevis cDNA clone IMAGE:3556968 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WashU Xenopus EST project, 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80.0%; Score 16; DB 2; Length 534;
83.3%; Pred. No. 2.5e+03;
iive 2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopus laevis (African clawed frog)
Xenopus laevis
```

Gарв

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Kenopus; Xenopus; X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: est@watson.wustl.edu
Library constructed by N. Garrett, E. ellefroid, and A.M. Zorn
Library constructed by N. Garrett, E. ellefroid, and A.M. Zorn
(Wellcome/CRC Institute). DNA Sequencing by: Washington University
Genome Sequencing Center.
Clone distribution: Xenopus clones from this library are available
through the I.M.A.G.E. Consortium/LINL at: info@image.llnl.gov
High quality sequence stop: 494.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               df10c01.x1 Wellcome CRC pRN3 St13 17 egg animal cap Xenopus laevis CDNA clone IMAGE:3556968 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="egg, subtracted by stage 13-17 animal cap"
|lab_host="DH10B (phage-resistant)"
|clone_lib="wellcome CRC pRN3 St13 17 egg animal cap"
|/clone_lib="wellcome CRC pRN3 St13 17 egg animal cap"
|/note="Vector: pERNN3; Site 1: Not!; Site 2: ECOR!; CDNAs were oligo-dT primed and directionally cloned. Staging were oligo-of Nieuwkoop and Faber. Library is subtracted and was constructed by N. Garrett, E Bellefroid, and A.M. Zorn, (Wellcome/CRC Institute)."
CHORI-230 Rat (BN/SsNHsd/MCW) BAC library produced by Pieter de Jong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80.0%; Score 16; DB 2; Length 575; 77.8%; Pred. No. 2.6e+03; ive 3; Mismatches 1; Indels
                                                                                                                                     80.0%; Score 16; DB 8; Length 557; 77.8%; Pred. No. 2.6e+03; tive 3; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xenopus laevis (African clawed frog)
Xenopus laevis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Xenopus laevis"
/mol_type="mRNA"
/db_xref="taxon:8355"
/clone="IMAGE:3556968"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                    3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BF231936.1 GI:11174069
                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                        :||||:|||:||||
23 GGCATGGCTAAGTGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14; Conservative
                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 14; Conserv;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
BF231936/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BX847762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E 1 (bases 1 to 557)
S Zhao, S., Shetty, J., Shatsman, S., Tsegaye, G., Geer, K.,
Shartsbeyn, A., Gebregeorgis, B., Overton, L., Russell, D., Chen, D.,
Riggs, F., de Jong, P. and Fraser, C.M.
Rat BAC End Sequences from Library CHORI-230 MboI segment
Unpublished (1999)
Other GSSs: CH230-45621.TV
Contact: Shaying Zhao
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0208
Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CH230-458G21.TJ CHORI-230 Segment 2 Rattus norvegicus genomic clone CH230-458G21, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: Stadoguigr.org
Clones are derived from the rat BAC library CHORI-210
(http://www.chori.org/bacpac/rat230.htm). For BAC library
availability, please contact Pieter de Jong (pdejong@mail.cho.org).
Clones may be purchased from BACPAC Resources
(http://www.chori.org/bacpac/or ering information.htm). BAC end
page: http://www.tigr.org/tdb/bac_ends/rat/bac_end_intro.html
Seg primer: SP6
Golumn: 21
                                                                                                                                                                                                    /clone="IMAGE:355668"
/tissue type="egg, subtracted by stage 13-17 animal cap"
/lab_hoge="egg, subtracted by stage 13-17 animal cap"
/lab_hoge="bloome CRC pRN3 St13 17 egg animal cap"
/clone lib="Wellcome CRC pRN3 St12 17 egg animal cap"
/note="Vector: pBSRN3; Site_1: NotI; Site_2: EcoRI; cDNAs were oligo-dT primed and directionally cloned. Staging according to Nieuwkoop and Faber. Library is subtracted and was constructed by N. Garrett, E Bellefroid, and A.M. Zorn, (Wellcome/CRC Institute)."
                                                                                                                                                                                                                                                                                                                                   CDNAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cell_type="Brain"
/clone_lib="CHORI-230 Segment 2"
/note="Vector: pTARBAC1.3; Site_1: MboI; Site_2: MboI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 16; DB 4; I
Pred. No. 2.6e+03;
3; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Rattus norvegicus"
/mol_type="genomic DNA"
/strain="BN/SsNHsd/MCW"
                                                                                                              /organism="Xenopus laevis"
                High quality sequence stop: 519.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10116"
/clone="CH230-458G21"
                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:8355"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BZ261544.1 GI:23971716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 77.8
nes 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Class: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BZ261544/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
```

ò g ö

Gaps

þe

```
double-stranded cDNA was ligated to a Drail adaptor [GGCCUACUGG], digested and directionally cloned into distinct Drail sites of the pMENBS-FL3. Library was size selected for 1.0 kb, with a average insert size of -1.2kb and is not amplified. Library constructed by Yutaka Suzuki (University of Tokyo Institute of Medical Science). Custom primers recommended for sequencings: 5' end primer 5'-GGATGTTGCCTTTAA-3' and 3' end primer 5'-GGATGTGCCTTGACACA-3'. Note: This is a Zebrafish Gene Collection (ZGC) library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue type="neural retina, retinal pigment epithelium, lens and overlying skin, pooled embryos"
/lab host="DH10B TonA"
/clone lib="NIH_ZGC_9"
/note="Organ: eye, Vector: pME18S-FL3; Site_1: DraIII;
Site_2: DraIII; 1st strand cDNA was primed with an
                                                                                      Vittue C. Cancer Destructs
National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 20892
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Chi-alin Chian
CDNA Library Preparation: Dr. Sumio Sugano
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC Clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM15261 row: a column: 06
High quality sequence start: 8
High quality sequence start: 8
Location/Qualifiers
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGCTGAAGACGCCTATGTGGCCTTTTTTTTTTTTTT];
                        Unpublished (1999)
Contact: Daniela S. Gerhard, Ph.D.
Office of Cancer Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .905
/organism="Danio rerio"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:7955"
/clone="IMAGE:7273520"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Site 2: DraIII; 1
oligo(dT) primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genomic gurvey sequence.
CC995546
CC995546.1 GI:33855422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC995546
                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Ina Rolfs
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany
RZPD; INAGP998018659.
RZPDIJB; I.M.A.G.E. cDNA Clone Collection (amp- resistant) (RZPDIJB
No.998) http://www.rzpd.de/cgi-
bin/products/showlib.pl.cgi/response?libNo=998 RZPDLIB; Xenopus
laevis Unidene Set 1 (RZPDIIB No.988) http://www.rzpd.de/cgi-
bin/products/showlib.pl.cgi/response?libNo=998 Contact: Ina Rolfs
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
Heubnerweg 6, D-14059 Berlin, Germany
Tel: +49 30 32639 101
Fax: +49 30 32639 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     / Mol type="mRNA"
//mol type="mRNA"
//db xref="laxon:8355"
//db xref="laxon:8355"
//dlo="lMAGD998E018659; iMAGE:3556968"
//lose="lMAGD998E018659; image 13-17 animal cap"
//lab_host="MH10B (phage-resistant)"
//lab_host="mellcome CKC pRN3 St13 17 egg animal cap"
//lone=lib="wellcome CKC pRN3 St13 17 egg animal cap"
//note="vector: pBSRN3; Site 1: Not!, Site 2: EccR1; cDNAs
were oligo-dT primed and directionally cloned. Staging
according to Nieuwkoop and Raber. Library is subtracted
and was constructed by N. Garrett, E Bellefroid, and A.M.
Zorn, (Wellcome/CRC Institute). "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGENCOURT 22405065 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7273520 CN501110
BX847762 Wellcome CRC pRN3 St13 17 egg animal cap Xenopus laevis cDNA clone IMAGp998E018659; IMAGE:3556968 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Danio.
1 (bases 1 to 905)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This clone is available royalty-free from RZPD; contact RZPD (clone@rzpd.de) for further information. Seg primer: RN_f, 5' GCAGAAGCTCAGAATAAACGCTC 3'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                   1 (bases 1 to 751)
Hell,O., Neubert,P., Peters,M., Radelof,U., Schneider,D., Schroth,A., Korn,B. and Landgrebe,J.
Xenopus laevis UniGene Set 1 (RZPDLIB No.988)
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80.0%; Score 16; DB 5; Length 751; 77.8%; Pred. No. 2.7e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1, Indels
                                                                                                                                                         Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Xenopus laevis"
                                                                                                                                                                                                                                                                (enopodinae; Xenopus; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           :[||:||:|||
503 CGCATGGCTAAGGAACCC 520
                                                                                                         BX847762.1 GI:39736970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CN501110.1 GI:46813734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Danio rerio (zebrafish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                    Kenopus laevis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Danio rerio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
CN501110/c
LOCUS
  LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
```

```
ö
                                                                                                                                                                                                                                                                                   CC995546 1inear GSS 18-AUG-2003 ZUAHI25TV ZM_3.0_4.0_KB Zea mays genomic clone ZMMBPa0069F01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD calde; Panicoideae; Andropogoneae; Zea.

1 (Dases 1 to 971)
Whitelaw, C.A., Paser, C.M., Budiman, M.A., Bedell, J.A., Robling, T., Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N.

Consortium for Maize Genomics
Other GSSs: ZUMHIZ5TH
Contact: Cathy Whitelaw
                                                        Gaps
                                                     ..
Length 905;
                                                  i, Indels
  Score 16; DB 7; 1
Pred. No. 2.7e+03;
                                                     3; Mismatches
```

ઠ g

Search completed: March 15, 2005, 15:20:45 Job time : 873.86 secs

ò

```
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Seed Intellectual Property Law Group PLLC STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; DB 3; Length 52;
4.2;
           Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSES: OPFENHELMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/236,140A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
82.2%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 4.2;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dubensky Jr., Thomas
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 22-Jan-1999
CLASSIFICATION: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (949) 823.6000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 39, Application US/09415784
Patent No. 6391632
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              823.6100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (949) 823.510
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                   CITY: NEWPORT BEACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 98104-7092
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: Washington
                                                                                                                                                                                          STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rolov,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapa
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length 52;
  DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                    Polo, John M.
Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Balli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Cullman, Louis C.
REGISTATION UNMER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION WIMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82.2%; Score 30.4; D
59.4%; Pred. No. 4.2;
tive 12; Mismatches
  82.2%; Score 30.4; D
59.4%; Pred. No. 4.2;
ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dubensky Jr, Thomas W Polo, John M.
                                                                                                                                                                                                                                                                                                                 APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 80, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
                                                                                                                                                                                                                                               Application US/09236140A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (949) 823.6100 INFORMATION FOR SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ibanez, Carlos B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: NEWPORT BEACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 59.44
Matches 19; Conservative
                                             19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: US
Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                        Patent No. 6376236
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-236-140A-80
                                                                                                                                                                                                        RESULT 13
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-236-140A-40
                                                                                                                                                                                                                                                     Sequence 40,
```

Gaps

IndelB

;

		•	
			· ·
			v V

us-09-699-667e-63.siz.rni

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/415,784
FILING DATE: 08-0ct-1999
LASSIFICATION: VUNKNOM>
ATTORNEY/AGENT INFORMATION:
NAME: MCMMACTER, DAVIG D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
FEFERENCE/DOCKET NUMBER: 33,963
FEFERENCE/DOCKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 78.4%; Score 29; DB 3; Length 56; Best Local Similarity 58.6%; Pred. No. 13; Matches 17; Conservative 12; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
```

27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55

ઠે 음 Search completed: March 15, 2005, 20:44:22 Job time : 61.5044 secs

THIS PAGE BLANK (USPTO)

```
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                         ö
                                                                                         Gaps
                                                                                         ö
            Length 52,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 92660

ZIP: 92660

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: BATCH COMPATIBLE
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-3an-1999
CLASSIFICATION: <unimal color of the color of th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 52;
                                                                                         Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polo, John M.
Lbanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 840 NEWPORT CENTER DRIVE, SUITE 700 CITY: NEWPORT BEACH STATES CALIFORNIA
                                                                                         1;
        51.6%; Score 29.4; DB 3;
58.1%; Pred. No. 44;
iive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3;
                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGC 34
                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51.6%; Score 29.4; 58.1%; Pred. No. 44 ative 12; Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 80, Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 40, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          823.6100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (949) 823. (1000RMATION FOR SEQ ID NO: 40 SEQUENCE CHARACTERISTICS
Query Match
Best Local Similarity 58.11
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 58.1-
Best Local 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ģ
                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                       셤
```

lbanez, Carlos E.

```
Schlesinger, Sondra
Bryga, Sergey A.
Prolov, 11ya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3; Length 52;
                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CORNETTE: TIMP PC compatible
CORNETTING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFTCATION: -Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSEE: OPPEMBINER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51.6%; Score 29.4; D
58.1%; Pred. No. 44;
ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC.compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; SEQUENCE DESCRIPTION: SEQ ID NO: 80:
US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Dubensky Jr., Thomas W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 39, Application US/09415784 Patent No. 6391632 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 823.6100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polo, John M.
Belli, Barbara A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (949) 823.6
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                     ZIP: 92660
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 98104-7092
COMPUTER READABLE FORM:
                                                                                                                                                                                       STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1.
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 58.1
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (949)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
                                                                                                                                                                                                               COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
US-09-415-784-39
```

7		
		,
		•
		•

```
;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
CURRENT APPLICATION DATA:

APPLICATION DATA:

APPLICATION NUMBER: US/09/415,784

FILING DATE: 08-OCC-1999

CLASSIFICATION: «Unknown»

ATTORNEY/AGENT INFORMATION:

NAME: MCMAREERS, DAVIG D.

REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 330049.457D1 /1196.006

TELECOMMUNICATION INFORMATION:

TELEPHONE: (206) 682-6031

TELEPHONE: (206) 682-6031

SEQUENCE CHARACTERISTICS:

LENGTH: 56 base pairs

TYBE: nucleic acid

SEQUENCE CHARACTERISTICS:

TOPOLLOGY: 1 innear

US-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 50.9%; Score 29; DB 3; Length 56; Best Local Similarity 58.6%; Pred. No. 60; Matches 17; Conservative 12; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
```

Search completed: March 15, 2005, 20:44:22 Job time : 95.75 secs

q

THIS PAGE BLANK (USPTO)

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Database

```
Sequence 7058, Ap Sequence 9080, Ap Sequence 5325, A Sequence 1027, Ap Sequence 16559, A Sequence 3457, Ap Sequence 189843, Sequence 189844, Sequence 189844, Sequence 167, App Sequence 167, App Sequence 167, App Sequence 31, App Sequence 31, App Sequence 31820, Ap Sequence 3182, App Sequence 315, App Sequence 315, App Sequence 315, App Sequence 315, App Sequence 231346, Sequence 231346, Sequence 107839, Sequence 231346, Sequence 189769, Sequence 189769, Sequence 189769, Sequence 189769, Sequence 189771, Sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 98146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Methods in
B US-10-719-993-7058

US-09-960-352-9080

US-10-424-599-53225

US-10-27-632-56559

T US-10-27-632-56559

T US-10-027-632-189843

US-10-027-632-189843

US-10-027-632-189843

US-10-027-632-189844

US-10-027-632-189844

US-10-027-632-189844

US-10-027-632-189844

US-10-027-632-189844

US-10-027-632-189844

US-10-27-632-189843

US-10-27-632-189844

US-10-27-632-18971

US-10-027-632-180783

US-10-027-632-107839

US-10-027-632-107839

US-10-027-632-107839

US-10-027-632-107839

US-10-027-632-189779

US-10-027-632-189779

US-10-027-632-189770

US-10-027-632-189770

US-10-027-632-189771

US-10-027-632-189771

US-10-027-632-189771

US-10-027-632-189771

US-10-027-632-189771

US-10-027-632-189771

US-10-027-632-189770

US-10-027-632-189771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 16.8; DB 18;
Pred. No. 52;
5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 126, Application US/10322281
Publication No. US20040126762A1
GENERAL INFORMATION:
APPLICANT: David W. Morris
APPLICANT: Marc S. Malandro
TITLE REPERENCE: 529452001000
CURRENT APPLICATION NUMBER: US/10/322,281
CURRENT FILIOR DATE: 2002-12-17
NUMBER OF SEQ ID NOS: 866
SOFTWARE: FRSENCE for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *::|||:|||:||| | 46153 CTGGCATGGCTAAGGGACAC 46172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: (1)...(98146)
    CTHER INFORMATION: n = A,T,C or G
US-10-322-281-126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84.0%;
       Query Match
Best Local Similarity 70.0
Matches 14; Conservative
                                                                                                                                                                                                                                             20190
20190
57130
135005
                                                                                                                                                                                                                                                                                                                   201
273
273
4487
4887
4887
572
572
612
     11543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
     US-10-719-900-844389
                                                                         \frac{1}{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 126
LENGTH: 98146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 1
US-10-322-281-126
     FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 126, App
Sequence 844389,
Sequence 281354,
Sequence 281354,
Sequence 2608, Ap
Sequence 7105, A
Sequence 6802, Ap
Sequence 53406, A
Sequence 53406, A
Sequence 15388,
                                                                                                                      March 15, 2005, 10:59:13 ; Search time 132.105 Seconds (without alignments) 900.574 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Published Applications NA:*

| cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                      11075104
                     GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 US-10-322-281-126
9 US-10-719-900-844389
3 US-10-027-632-281354
US-00-764-877-2608
7 US-10-242-515-2608
8 US-10-437-963-7165
8 US-10-439-53406
8 US-10-425-115-115-288
7 US-10-425-115-115-88
                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                  5537552 seqs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                        nucleic search, using sw model
                                                                                                                                                                                       US-09-699-667E-66
20
1 bksgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                             IDENTITY NUCDX Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118
119
118
118
118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1010
191597
201
358
98686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       884.0
880.0
79.0
779.0
779.0
779.0
778.0
```

189770, 227686

Sequence Sequence Sequence ö

Gaps

ö

16 15.8 15.8 15.8 15.8 15.8 15.6 15.6

1264897 00000

Result No.

```
RESULT 5
US-09-764-877-2608/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-242-515-2608/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-027-632-281354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 2608
LENGTH: 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREAM. IN CREATION:
JUNEAR TO THE OF INVENTION: JUNEAR JUNE GENERAL
TITLE OF INVENTION: JUNEAR JUNE GENERAL
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REPERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/27,632
CURRENT FILING DATE: 2002-04-30
FRIOR APPLICATION NUMBER: US 60/198,676
FRIOR APPLICATION NUMBER: US 60/198,676
FRIOR APPLICATION NUMBER: US 60/199,483
FRIOR APPLICATION NUMBER: US 60/193,483
FRIOR APPLICATION NUMBER: US 60/193,483
FRIOR APPLICATION NUMBER: US 60/193,483
FRIOR APPLICATION NUMBER: US 60/193,363
FRIOR FILING DATE: 1999-11-23
FRIOR FILING DATE: 1999-11-23
FRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 15.8; DB 13; Length 552;
Pred. No. 2.2e+02;
5; Mismatches 1; Indels 0;
                                                                 APPLICANT: Xue Mei Zhou
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REPRESENCE: 3528.1
CURRENT APPLICATION NUMBER: US/10/719,900
CURRENT PILING DATE: 2003-11-20
PRIOR APPLICATION NUMBER: 60/427,808
PRIOR PILING DATE: 2002 11 20
PRIOR FILING DATE: 98214
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 16; DB 19; Length 25;
Pred. No. 2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 325720
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 281354
LENGTH: 552
Sequence 844389, Application US/10719900
Publication No. US200S0026164A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-027-632-281354/c
; Sequence 281354, Application US/10027632
; Publication No. US20020198371A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-027-632-281354/c
; Sequence 281354, Application US/10027632
; Publication No. US20030204075A9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 87.5%;
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 68.4%;
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 GCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s gcargecraagegace 20
                                                                                                                                                                                                                                                                                                                                                                   ) ORGANISM: Mus musculus
US-10-719-900-844389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , ORGANISM: Human
US-10-027-632-281354
                                                                                                                                                                                                                                                                                          SEQ ID NO 844389
LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
```

```
GENERAL INCORANT: WARD, David G.

TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
CURRENT PILING DATE: 2002-04-30
FRIOR PILING DATE: 2000-07-12
FRIOR PLICATION NUMBER: US 60/218,006
FRIOR FILING DATE: 2000-07-12
FRIOR FILING DATE: 2000-07-20
FRIOR FILING DATE: 2000-07-20
FRIOR FILING DATE: 2000-03-29
FRIOR FILING DATE: 2000-03-29
FRIOR FILING DATE: 2000-03-29
FRIOR FILING DATE: 1900-02-24
FRIOR FILING DATE: 1900-02-28
FRIOR FILING DATE: 1999-09-28
FRIOR FILING DATE: 1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 552;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2608, Application US/09764877

Sequence 2608, Application US/09764877

GENERAL INFORMATION:

TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PC005

CURRENT APPLICATION NUMBER: US/09/764,877

CURRENT FILING DATE: 2001-01-17

Prior application data removed - refer to PALM or file wrapper NUMBER OF SQ ID NOS: 4031

SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79.0%; Score 15.8; DB 9; Length 772; 68.4%; Pred. No. 2.2e+02; ive 5; Mismatches 1; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2608, Application US/10242515
; Publication No. US20040009488A1
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79.0%; Score 15.8; DB 17; 68.4%; Pred. No. 2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84 TIGGCAIGGCIAAGGGICC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 79.0
Best Local Similarity 68.4
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
CORGANISM: Homo sapiens
US-09-764-877-2608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best_Local Similarity
Matches 13; Conserv
```

ò

ö

```
Sequence 6802, Application US/10719993
Publication No. US20040265849A1
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: CREMILL, Michele et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REFERENCE: CL001496
FILE REFERENCE: CL001496
CURRENT APPLICATION NUMBER: US/10/719,993
CURRENT FILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 55342
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6802
LENGTH: 191597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 53406, Application US/10719993
Publication No. US20040265849A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REREBERGE: CL001496
FILE REREBERGE: CL001496
CURRENT PILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 55342
SSOFTWARE: PASESEQ for Windows Version 4.0
LENGTH: 201
                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 191597,
                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79.0%; Score 15.8; DB 18; 68.4%; Pred. No. 1.7e+02; tive 5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 15.6; DB 18;
Pred. No. 2.9e+02;
4; Mismatches 2;
            73.7%; Pred. No. 2.1e+02; ive 4; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-10-425-115-115288
Sequence 115288, Application US/10425115
Publication No. US20040214272A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Kovalic, David K.
APPLICANT: Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50713 CTGGCATGGCTAAGGCACC 50731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                    1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78.0%;
70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 68.44
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 70.0°
Matches 14; Conservative
          Best Local Similarity 73.7
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo sapiens
US-10-719-993-6802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
CORGANISM: Homo sapiens
US-10-719-993-53406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
US-10-719-993-53406/c
                                                                                                                                                                                                              RESULT 8
US-10-719-993-6802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 77165, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: APPLICANT: Cao, Yongwei
APPLICANT: Mu, Wei
APPLICANT: Boukharcov, Andrey A.
APPLICANT: Boukharcov, Andrey A.
APPLICANT: Boukharcov, Andrey A.
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
TITLE PLING DATE: 2003-05-14
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT PILING DATE: 2003-05-14
SEQID NO 77165
FILE REFERENCE: PC005C1

CURRENT APPLICATION NUMBER: US/10/242,515

CURRENT FILING DATE: 2002-09-13

PRIOR PILING DATE: 2001-01-17

PRIOR FILING DATE: 2000-01-11

PRIOR PILING DATE: 2000-01-11

PRIOR APPLICATION NUMBER: 60/180,628

PRIOR APPLICATION NUMBER: 60/214,886

PRIOR PILING DATE: 2000-05-21

PRIOR PILING DATE: 2000-05-21

PRIOR PILING DATE: 2000-05-21

PRIOR PILING DATE: 2000-05-21

PRIOR PILING DATE: 2000-07-11

PRIOR PILING DATE: 2000-07-14

PRIOR PILING DATE: 2000-07-14

PRIOR PILING DATE: 2000-08-14

PRIOR PILING DATE: 2000-07-14

PRIOR PILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79.0%; Score 15.8; DB 18; Length 1010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 15.8; DB 17; Length 772;
Pred. No. 2.2e+02;
5; Mismatches 1; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Clone ID: PAT_MRT4530_7708C.1 US-10-437-963-77165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: unsure
LOCATION: (1)..(1010)
OTHER INFORMATION: unsure at all n locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84 TIGGCAIGGCIAAGGGICC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 68.4%;
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 2608
LENGTH: 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens US-10-242-515-2608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-437-963-77165/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
```

ઠે

```
g
                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-719-993-7058/C
US-10-719-993-7058/C
US-10-719-993-7058/C
US-10-719-993-7058, Application US/10719993
| Publication No. US20040265849A1
| GENERAL INFORMATION:
| APPLICANT: CARGILL, Michel et al.
| TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
| TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
| TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
| CURRENT APPLICATION NUMBER: US/10/719,993
| CURRENT APPLICATION NUMBER: US/10/719,993
| CURRENT FILING DATE: 2003-11-24
| NUMBER OF SEQ ID NOS: 55342
| SEQ ID NO 7058
| SEQ ID NO 7058
| LIRGTH 115434
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants
FILE REPERENCE: 38-21 (53222) B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 115288
LENGTH: 358
                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Steat P. Monia
APPLICANT: Steat M. Freier
APPLICANT: Stean M. Freier
APPLICANT: Kenneth W. Dobie
TITLE OF INVENTION: ANTISENSE MODULATION OF TGF-BETA 2 EXPRESSION
FILE REPERENCE: PTS-0038
CURRENT APPLICATION NUMBER: US/10/189,267
CURRENT FILING DATE: 2002-07-02
NUMBER OF SEQ ID NOS: 284
SEQ ID NO SO.
                                                                                                                                                                                                                                                                                                                                                                                                        .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 98686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                  Score 15.6; DB 18; Length 358;
Pred. No. 2.9e+02;
4; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NAME/KEY: misc_feature
; LOCATION: 28031, 59631, 59767, 78835-78934, 96078-96177
; OTHER INFORMATION: n = A, T,C or G
US-10-189-267-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 78.0%; Score 15.6; DB 17; Best Local Similarity 75.0%; Pred. No. 2.2e+02; Matches 15; Conservative 3; Mismatches 2;
                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Clone ID: MRT4577_36627C.1 US-10-425-115-115288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68874 CTAGCATGGCAAAGGGACCC 68893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 20, Application US/10189267
Publication No. US20040006030A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 KSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                        78.0%;
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 72.23
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
COGANISM: Homo sapiens
US-10-719-993-7058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: H. sapiens
                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 98686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-189-267-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
Sequence 53225, Application US/10424599
; Beduence 53225, Application No. US20040031072A1
; GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: La Road Thanas J
APPLICANT: Zhou Yihua
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILIE REFERENCE: 38-21 (5323) B
CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 53225
LENGTH: 442
                                                                                                                                                                                                                                                                                                                             APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: MUCKEIC AND FAT DEPOSITION
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298) C
CURRENT PAPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 9080
                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
    Length 115434;
                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77.0%; Score 15.4; DB 9; Length 353; 82.4%; Pred. No. 3.6e+02; ive 2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: unsure
LOCATTON: (271)
OTHER INFORMATION: unsure at all n locations
OTHER INFORMATION: Clone ID: 39-LIB3058-011-Q1-K1-B4
Score 15.6; DB 18;
Pred. No. 2.2e+02;
4; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77.0%; Score 15.4; DB 17;
82.4%; Pred. No. 3.6e+02;
tive 2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Clone ID: PAT_MRT3847_19074C.1
                                                                                                                                                                                                                                           ; Sequence 9080, Application US/09960352
; Patent No. US20020131139A1
; GENERAL INFORMATION:
; APPLICANT: Warren, Wesley C.
                                                                                                                  93388 TGTGCATGGCTAAGGGACTC 93369
                                                                                         1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208 GCATGGCTGAGGGACCC 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 GCAUGGCUAAGGGACCC 20
  78.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 82.4
Matches 14; Conservative
                      Best Local Similarity 70.0
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
US-10-424-599-53225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-424-599-53225
                                                                                                                                                                                                  RESULT 13
US-09-960-352-9080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-960-352-9080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 353
    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
```

232 GCATGGCTATGGGACCC 248

а

```
US-90-644-71-1027/C
Sequence 1027, Application US/09664761
Sequence 1027, Application US/09664761
Sequence 1027, Application US/09664761
Sequence 1027, Application US-00200200487631
Septem No. US-00200200487631
Septem No. US-00200200487631
Septem No. US-00200487631
Septem No. US-00200497631
Septem No. US-002004979744203
Septem No. US-002004974987631
Septem No. US-0020049744203
Septem No. US-0020049749744203
Septem No. US-0020049749744203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N: EXPRESSED IN HEART, SIGNAL = 2.9
N: EXPRESSED IN BONE MARROW, SIGNAL = 3.6
N: EXPRESSED IN HELLOO, SIGNAL = 2.2
N: EXPRESSED IN FETAL LIVER, SIGNAL = 2.9
N: EXPRESSED IN LUNG, SIGNAL = 2.9
N: EXPRESSED IN ADULT LIVER, SIGNAL = 1.7
N: EXPRESSED IN PLACENTA, SIGNAL = 3.5
N: EXPRESSED IN PLACENTA, SIGNAL = 2.4
N: EXPRESSED IN HEARY, SIGNAL = 2.4
N: EXPRESSED IN HELA, SIGNAL = 2.8
N: EXPRESSED IN HELA, SIGNAL = 3.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 1027
LENGTH: 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
PEATURE:
OTHER INFORMATION: MAP TO
OTHER INFORMATION: EXPRES
OTHER INFORMATION: EXPRES
OTHER INFORMATION: EXPRES
OTHER INFORMATION: EXPRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTHER INFORMATIC
COTHER C
```

```
Query Match 77.0%; Score 15.4; DB 9; Length 454;
Best Local Similarity 70.6%; Pred. No. 3.6e+02;
Matches 12; Conservative 5; Mismatches 0; Indels 0; Gaps 0;
Qy 1 BKSGCAUGGCUAAGGGA 17
```

435 CTGGCATGGCTAAGGGA 419

셤

Search completed: March 15, 2005, 15:52:14 Job time : 134.105 secs

THIS PAGE BLANK (USPTO)

, Appli 8, Appl

Sequence Seq

US-08-995-162-1875
US-08-998-09-373
US-09-112-086B-7
US-08-975-238-5
US-08-679-645-1234
US-09-676-807-9
US-09-612-186-5
US-09-812-186-5
US-09-401-063-1875

Sequence Sequence Sequence Sequence 1 Sequence 1 Sequence 8

Sequence

US-08-679-645-606 US-09-474-432B-1309 US-09-476-387-1308 US-09-443-199C-8U US-08-363-1031

Sequence

ALIGNMENTS

```
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JS-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 39, Appl
Sequence 19, Appl
Sequence 3088, Ap
Sequence 40, Appl
Sequence 40, Appl
Sequence 2703, Ap
Sequence 2703, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40, Appl
80, Appl
80, Appl
80, Appl
40, Appl
80, Appl
80, Appl
33, Appl
34, Appl
36, Appl
36, Appl
37, Appl
38, Appl
38, Appl
39, Appl
39, Appl
30, Appl
30, Appl
30, Appl
31, Appl
31,
                                                                                                                                                                                            March 15, 2005, 15:26:58; Search time 94.75 Seconds (without alignments) 984.356 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                       1 ggguccaccuccucgcggun......ggggcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*
): /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
): /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
): /cgn2_6/ptodata/1/ina/RDCTUS_COMB.seq:*
): /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
): /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                          GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -08-585-684B-2703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -09-236-140A-40
-09-236-140A-80
-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-741-881-40
US-08-73-158-80
US-08-73-158-80
US-08-739-158-80
US-08-739-157-40
US-08-739-167-40
US-08-931-869-80
US-08-931-869-80
US-08-931-869-80
US-09-350-399-40
US-09-350-399-40
US-09-350-399-40
US-09-350-399-40
US-09-415-784-39
US-09-415-784-39
US-09-415-868-39
US-09-415-868-39
US-09-415-868-39
US-09-415-908-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-038-073-2703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                       nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                            US-09-699-667E-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 
                                                                                                                                                                                                                                                                                                            Title: .
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic
                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Result
```

```
NESULT 1

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-40

105-06-741-801-80

105-06-741-801-80

105-06-741-801-80

105-06-741-801-80

105
```

```
Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 40, Application US/08739158
Patent No. 5814482
GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT: Dolo, John M.
APPLICANT: Dolo, STERET: Golo, Columbia Center, 701 Fifth Avenue
                                                                                                                                 Sequence 80, Application US/08741881

Patent No. 5789245
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: Washington:
COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: BIM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
MAME: MCMBatches, David D.
REGISTRATION UNMBER: 33,633
REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007
TELECPHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                    E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Pred. No. 44;
12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 29.4;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.6%;
58.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 58.1%
----hes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                              RESULT 2
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                            셤
```

```
CONTRACT US

CONTRACT SERVICED STATE OF CONTRACT SERVICED STATE ST
```

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Obligas J.
APPLICANT: David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlon M.
APPLICANT: Danez, Carlon M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRENT APPLICATION DATA:

SOFTWARE:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-0CT-1996
CLASSIPICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMBACERS, 33,963
REFERENCE/DOCKET NUMBER: 33,963
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-631
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 22 base pairs
TYPE: nucleic acid
STAPE: nucleic acid
STAPE: MARIEDMESS: single
                                                                                                                                                                                                                       S: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
    Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 40, Application US/08404796
Patent No. 6015686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 58.1%;
Matches 18; Conservative 1;
                                                                                                                                                                                                                                                                                                                            ZIP: 28104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 6300 Columb
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                          Washington
                                                                                                                                                                                                                                         STREET: 6300 CC CITY: Seattle STATE: Washingt COUNTRY: US
                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EURARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS
                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                         ö
                                                                                                           Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 52;
                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: Wabilington:
COUNTY: 08
2 IP: 98104-7092
2 IP: 98104-7092
2 IP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORREY/AGENT INFORMATION:
NAME: MCMASLETS David D.
REGISTRATION NUMBER: 33,963
FELECHONE: (206) 622-4900
TELECHONE: (206) 622-4900
TELECHONE: COS OF DE NO: 40:
SEQUENCE CHARACTERISTICS:
TENERAL CAS OF DASE DAILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                         51.6%; Score 29.4; DB 1;
58.1%; Pred. No. 44;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                            1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Pred. No. 44;
12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51.6%; Score 29.4; 58.1%; Pred. No. 44
                                                                                                                                                                                                                                                                                                                                                     Sequence 40, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 80, Application US/08739167
Patent No. 5843723
                                                                                                                                Best Local Similarity 58.14
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 58.1<sup>1</sup>
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: Bingle
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and I
STREET: 6300 Columbia
; TYPE: nucleic acid
; STRANDEDNESS: singl
; TOPOLOGY: linear
US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-739-167-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
US-08-739-167-80
                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
```

Gaps

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 52;
                                                             Length 52;
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE PACENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION 1435
PRIOR APPLICATION DATE: 08/404,796
ATHING DATE: 15-MAR-1995
ATHING DATE: 15-MAR-1995
ATHING DATE: 35-MAR-1091
NAME: MOCHASTERS DATE: 33,963
REGISTRATION NUMBER: 33,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       930049.423C5 / 1146.006
                                                          51.6%; Score 29.4; DB 3;
58.1%; Pred. No. 44;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3;
                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51.6%; Score 29.4; 58.1%; Pred. No. 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Dubensky Jr, Thomas W APPLICANT: Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
US-08-931-869-80
; Sequence 80, Application US/08931869
; Patent No. 6015694
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          US-08-931-869-40
; Sequence 40, Application US/08931869
; Patent No. 6015694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (206) 682-6031
INPORMATION FOR SEQ 1D NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 58.13
Matches 18; Conservative
                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-931-869-40
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 80, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Dalyw. Daylas J.
APPLICANT: Driver, Dayla A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION ENFARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 3; Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGNATE:
COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER: ELAPABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CURRENT APPLICATION NUMBER: US/08/404,796
TELISNE TATORNEY/AGENT INFORMATION:
MAME: MCMASTERT DON'S
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECHONE: (206) 622-4900
TELECHONE: (206) 622-4900
TELEFAX: (206) 622-4900
INFORMATION POR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
COMPUTER: CALLOR OF SEQ ID NO: 80:
COMPUTER: CALLOR OF SEQ ID NO: 80: 80: 80: 80: 80: 80: 80: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                   CURRENT APPLICATION DATA:

SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMBARER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECPMONIONICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: 25 Dase pairs
TYPE: nucleic acid
STRUET NUMBER: 35 Dase pairs
TYPE: nucleic acid
STRUET NUMBER: 31,903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCACCTCGTGGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.6%; Score 29.4; 58.1%; Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 58.1%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BEI
STREET: 6300 Columbia (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

ö

Gaps

```
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 52;
                                                                                                                                                                NAME: MCMBETER, David D.
REGISTRATION NUMBER: 33,963
REPERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
INFORMATION FEED 622-4900
INFORMATION FEED 1D NO: 40:
SEQUENCE CHARACTERISTICS:
LENTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: MCMASTERS, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indele
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-Jul-1999
CLASSIFICATION: <UNknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51.6%; Score 29.4; 58.1%; Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-U1-1999
CLASSIFICATION: <unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQ ID NO: 80: US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 80, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Dubensky Jr,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 58.13
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JS-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                          APPLICANT: Thanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Joily, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STREET: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
Folo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
SETABLES SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION A135
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCAMESER: US 08/404,796
FILING DATE: 15-WAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCAMESER: US 08/404,796
FILING DATE: 15-WAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCAMESER: US 08/404,796
FILING DATE: 15-WAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCAMESER: US 08/404,796
FILING DATE: 15-WAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCAMESER: US 08/404,796
FILING DATE: 15-WAR-1995
ATTORNEY/AGENT NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
FREFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 rccaccrccrcccccaccrcccarcc 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 29.4;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
  Dubensky Jr, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80.
SEGUIENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 58.1
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                     COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-931-869-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
```

Gaps

ő

ð g

```
APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Intellectual Property Law Group PLLC
                                                                                                                                                                                               Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                         STREET: 840 NEWPORT CENTER DRIVE, SUITE 700 CITY: NEWPORT BEACH STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3;
                                                                                                            ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 701 Fifth Avenue, Suite 6300
CITY: Seattle
STATE: Washington
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.6%; Score 29.4; 58.1%; Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 39, Application US/09415784 Patent No. 6391632 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 58.1%
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                  COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                     ö
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                     ö
   DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY AGENT INFORMATION:
NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
RECISTRATION NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
TELEFAX: (949) 823.6100
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                        Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: «Unknown»
                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
STATE: CALIFORNIA
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                     1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Pred. No. 44;
12; Mismatches
                                     12; Mismatches
   51.6%; Score 29.4; 58.1%; Pred. No. 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
51.6%; Score 29.4;
Best Local Similarity 58.1%; Pred. No. 44
Matches 18; Conservative 12; Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                      APPLICANT: Dubensky Jr, Thomas W Polo, John M. Ibanez, Carlos E. Chang, Stephen M.W. Jolly, Douglas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 80, Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
PPLICANT: Dubensky Jr, Thomas W
Ibanez, Carlos E.
                                                                                                                                                                                                     Sequence 40, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS
                  Best Local Similarity 58.18
Matches 18; Conservative
                                                                                                                                                                   RESULT 13
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-236-140A-40
     Query Match
```

ઠે 요

ö

```
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

PULING DATE: US/09/415,784

PLING DATE: 08-Oct-1999

CLASSIFICATION: -Unknown-

TORNEY/AGENT INPORMATION:

NAME: MCAMBERES: 33,963

REGISTRATION NUMBER: 33,963

REGISTRATION NUMBER: 33,963

FELECOMMUNICATION INPORMATION:

TELEPHONE: (206) 622-4900

TELEPHONE: (206) 622-4900

TELEPAK: (206) 622-4900

TELEPAK: (206) 622-631

INFORMATION FOR SEQ ID NO: 39:

SEQUENCE CHARACTERISTICS:

LYPE: uncleic acid

STRANDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION: SEQ ID NO: 39:

US-09-415-784-39
```

Search completed: March 15, 2005, 20:44:22 Job time: 95.75 secs

; 0

Gaps ö

Query Match 50.9%; Score 29; DB 3; Length 56; Best Local Similarity 58.6%; Pred. No. 60; Matches 17; Conservative 12; Mismatches 0; Indels

a ò

THIS PAGE BLANK (USPTO)

us-09-699-667e-62.siz.rng

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

del	
ош ма	
using	
search,	
ucleic	
M nucleic	
õ	

March 15, 2005, 11:20:37; Search time 316.25 Seconds (without alignments) 1066.957 Million cell updates/sec Run on:

US-09-699-667E-62 57

1 ggguccaccuccucgcggun.......5gggcauggcuaagggaccc 57 Title: Perfect score: Sequence,:

IDENTITY NUCDX.
Gapop 10.0 , Gapext 1.0 Scoring table:

4390206 segs, 2959870667 residues Searched:

4316768 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 60

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

N. Geneseq\_16Dec04:\*

1. geneseqn1980s:\*
2. geneseqn1990s:\*
3. geneseqn2001as:\*
5. geneseqn2001bs:\*
6. geneseqn2001bs:\*
7. geneseqn2001bs:\*
8. geneseqn2003as:\*
9. geneseqn2003as:\* geneseqn2003cs:\*
geneseqn2003ds:\*
geneseqn2004as:\*
geneseqn2004bs:\* Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Aaz57638 Trans-act	Aaz57636 Trans-act	Aaz57637 Trans-act	Aaz57639 Nucleotid	Aag86173 Primer HD	Adr47040 Dengue vi	Adt48965 PCR prime	Aaq86204 Sindbis/H	Aat31151 HDV rever	Aat30817 HDV riboz	Aav42394 Nested PC	Aav42426 Forward P	Aav60154 Nested PC	Aav60185 Reverse P	Aav70746 Reverse P	Aav70714 Nested pr	Aaz92930 Hepatitis	Aaz92970 Hepatitis	Aaz92843 Hepatitis	Aaz92803 Hepatitis
SUMMARIES	ΩI	AAZ57638	AAZ57636	AAZ57637	AAZ57639	AAQ86173	ADR47040	ADT48965	AAQ86204	AAT31151	AAT30817	AAV42394	AAV42426	AAV60154	AAV60185	AAV70746	AAV70714	AAZ92930	AAZ92970	AAZ92843	AAZ92803
	DB		m	ო	m	N	13	13	~	ď	ď	~	~	~	N	~	~	٣	m	m	m
	Length	57	57	57	37	51	48	48	52	52	52	52	52	52	52	52	52	52	52	52	52
	% Query Match	100.0	83.2	83.2	59.6	51.9	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
	Score	57	47.4	47.4	34	29.6	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
	Result No.		7	m	4	50	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20

Perreault J, Ananvoranich S, Lafontaine D;

(UYSH ) UNIV SHERBROOKE.

Z X I X

Aal38850 Alphaviru	Aal38810 Alphaviru	Abk46276 HDV antig	Abk46316 Hepatitis	Adi30383 Hepatitis	Adi30423 Hepatitis	Adol3982 Eukaryoti	Adol3942 Eukaryoti	Adhl0551 Hepatitis	Aax59264 Nested pr	Aax58506 Nested pr	Abx81463 Sindbie v	Ada50686 Sindbis v	Aax78132 Hepatitis	Aal31589 Human SNP	Aaa60850 AS-DHFR-G	Abt06104 Human IgM	Aaq46668 Substrate	Abt06092 Human IgM		Abt06094 Human IgM	Aah50314 Bacterial	Abt06091 Human IgM	Human	Aal29909 Human SNP
AAL38850	AAL38810	ABK46276	ABK46316	ADI30383	ADI30423	ADO13982	ADO13942	ADH10551	AAX59264	AAX58506	ABX81463	ADA50686	AAX78132	AAL31589	AAA60850	ABT06104	AAQ46668	ABT06092	ABT06093	ABT06094	AAH50314	ABT06091	ABN42304	AAL29909
9	ø	9	φ	17	12	12	12	12	~	~	8	σ	~	4	m	9	7	9	ø	9	4	9	9	4
52	52	52	52	52	52	52	52	57	26	26	26	26	45	51	52	51	52.	52	52	52	20	52	9	20
51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	50.9	50.9	50.9	50.9	49.1	43.5	42.5	42.1	42.1	42.1	42.1	42.1	41.8	41.4	41.4	41.1
29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29	59	59		28	24.8	24.2	24	24	24	24	24	23.8	23.6	23.6	23.4
21	22	23	24	25	56	27	28	29	30	31	32	33	34	35	c 36	c 37	38	c 39	c 40	c 41	c 42	c 43	C 44	45

## ALIGNMENTS

18825763 125763 125763 125763 125763 1368-a 1368	T 1 638 AAZ57638 standard; RNA; 57 BP.	Z57638;	-SEP-2003 (revised)		Trans-acting antigenomic delta ribozyme nucleotide segmence.		inherited disease; ss.	Hepatitia D viria.		y Location/Qualifiers		/*tag≈ a	`	719	or hinding on or	 /"tag= c /bound moiety= "SP1.1 substrate bases (AAZ57641) 5-11"	3045	υ,	/ttag= e /notes "Rorms a double stranded region with bases 6-1"	9955856-A2.	-NOV-1999.	-APR-1999; 99WO-CA000391,	-APR-1998; 98CA-02230203.	
AA257638 sta XX AAC AA557638 sta XX AA557638; XX AA557638; XX AA557638; XX AA557638; XX AA557638; XX Trans-acting XX Trans-acting XX Hepatitis D XX	LT 1 7638 AAZ57638 Bte	AAZ57638;	15-SEP-2003	05-APR-2000	Trans-actino	Trans-acting	inherited di	Hebatitis D	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Key	misc binding	l		stem_loop	mior binding		stem loop	misc binding	l	WO9955856-A2.	04-NOV-1999.	29-APR-1999;	29-APR-1998;	

```
ö
                                                                                                        This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate SP1.1 (see PAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltazze1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNINN-1'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate antice of the substrate substrate invention is used to cleave a substrate mucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave that substrate with the enzyme and disagnostic enzymes also have other therapeutic, biotechnological and disanostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *tag= a
note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /bound_moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
30. 45
7-tegg= d
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUGGGGUCCGACCUGGGCUAGGCUUCGGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                           New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.1; ss.
                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 57; DB 3; Length 57; Best Local Similarity 89.5%; Pred. No. 2.9e-07; Matches 51; Conservative 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                              Seguence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ57636 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 25
                                                                               Example 1; Fig 2; 52pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   '*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ57636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        용
```

```
ö
                                                                                                                                                      cleaves substrate SP1. (see AAZ7641). The invention relates to a nuclair acid enzyme (e.g. deltaR2P1.) that is constructed to have a substrate binding portion with the following sequence 3. UNNXNN-5. The substrate of the enzyme has the sequence 5.-14. *GNNHNN-3. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of enclotides 3' to the least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate with the enzyme. The enzyme is used to cleave site by mixing the substrate with the enzyme. The enzyme is used to cleave with zhe enzyme in the state of cleave it is presented to the cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                          This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= a
//oute= "Forms double stranded region with bases 52-57"
/*tag= b
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 c
_moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGGUCCGACCUGGGCAUGGGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                              useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                               83.2%; Score 47.4; DB 3; Length 57; 78.9%; Pred. No. 0.00032; live 6; Mismatches 6; Indel8
                                                                                                                                                                                                                                                                                                                                                                   Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
 Lafontaine D;
                                                              New construction of nucleic acid enzyme diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                              Example 1; Fig 1A; 52pp; English.
Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98CA-02230203.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30. .45
/*tag= d
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57637 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20. .25
/*tag= c
/bound_mc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYSH ) UNIV SHERBROOKE
                                 WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
```

us-09-699-667e-62.siz.rng

```
This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the substrate (cleavage site of nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                    New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3; Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 59.6%; Score 34; DB Best Local Similarity 82.4%; Pred. No. 5; Matches 28; Conservative 6; Mismatches
                                                                                                                                                                                Lafontaine
                                                                                                                                                                                                                                                                                            diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chang SM,
                                                                                                                                                                                                                                                                                                                                    Example 5; Fig 4; 52pp; English.
                                                                                                                                                                             Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93US-00122791
94US-00198450
                                          99WO-CA000391
                                                                                      98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dubensky TW, Ibanez CE,
                                                                                                                                 SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
                                                                                                                                                                                                                        WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (VIAG-) VIAGENE INC
                                                                                                                                 VINU ( HSYU)
                                                                                                                                                                             Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9507994-A2.
                                          29-APR-1999;
                                                                                      29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .5-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L8-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
21-NOV-1995
  04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAQ86173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAQ86173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     XIXBXBBXBXBX SXEE EXHAX SXIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                   This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme cleaves substrate SP1.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.2) that is constructed to have a substrate binding portion with the following sequence 3' UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H**GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site of the substrate (cleavage site of the substrate sequence. The enzyme of the invention is used to cleava a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing the rangular inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /bound_moiety= "RzB fragment of bimolecular ribozyme" /note= "Porms double-stranded region with bases 20-16 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /bound_molety= "Ribozyme substrate Pl.1"
/note= "Forms double-stranded region with bases 11-6 of
sequence AAZ57641"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /bound_moiety= "RzB fragment of bimolecular ribozyme"
/note= "Forms double-stranded region with bases 8-1 of
sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGGUCCCAGCUGGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                       New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 83.2%; Score 47.4; DB 3; Length 57; 1 Similarity 78.3%; Pred. No. 0.00032; 45; Conservative 6; Mismatches 6; Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleotide sequence of bimolecular ribozyme RzA fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bimolecular ribozyme, viral RNA cleavage; RzA fragment, inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              deltaRzP1.1 sequence (AAZ57636) shown in figure 1
                       Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                Example 1; Page; 52pp; English
                     Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57639 standard; RNA; 37 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=_
                                                                 WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
misc_binding
                       Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ57639;
```

Matches

셤 ઠ

ö

Gaps

. 0

Indels

ö

Polo JM;

Driver DA,

```
The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The maplified DNA sequences were used in the construction of a cukaryotic layered vector initiation system (EVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors like cervical cancer and viral diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A dengue virus recombinant replicon has a deletion of the complete coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ss; cytostatic; virucide; dengue virus; recombinant replicon; deletion; prem protein; C protein; NS1 protein signal; vaccine; cervical cancer; viral disease; antigen; dendritic cell; immune response; human papillomavirus.
                                                                  New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51.9%; Score 29.6; DB 2; Length 51; 52.3%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCACCTCCTCGCGGTCCGACCTGGGCATCGGAAGGAGGACGAC 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 51 BP; 9 A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TENG-) TENGEN BIOMEDICAL CO.
(BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 4; SEQ ID NO 37; 38pp; Chinese.
                                                                                                                                                                            Example 2; Page 68; 260pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADR47040 standard; DNA; 48 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JAN-2004; 2004WO-CN000088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JAN-2003; 2003CN-00115272
30-JAN-2003; 2003CN-00115273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23; Conservative
WPI; 1995-131362/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-625870/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2004072274-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADR47040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADRATORO
ADR
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
```

Gaps ö

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its self-replication function. The virus is useful in producing the vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the
                e.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of the front 20 amino acids in the C protein, and the coding region of NSI protein signal; coding regions of all non-structural proteins. The obtained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can certificately express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a generation of the full-length dengue virus cDNA clone
                                                                                                                                                                                                                                                                                   cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Virucide; Japanese encephalitis B virus; bivalent vaccine; hepatitis B;
sequence for preM protein of dengue virus and also includes elements of
                                                                                                                                                                                                                                                              (pRs/FLD2). The recombinant virus vectors were transfected into baby hamster kidney (BRK) cells to enable the screening of BKK-21 Tet-off lines. This sequence corresponds to an oligonucleotide used in the recombinant replicon of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                         51.6%; Score 29.4; DB 13; Length 48; 58.1%; Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                 Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TENG-) TENGEN BIOMEDICAL CO.
BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                                                                              (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17 TCCACCTCCTCGCGGTCCGACCTGGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCR primer 5' HDVr, seg id 29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-MAR-2003; 2003CN-00115912.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADT48965 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TENGEN BIOMEDICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-699719/68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCR; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004082712-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADT48965;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADT48965
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

34

UCCACCUCCUCGCGGUNNNNNNGGGCAUGC

4

888888

```
RESULT 9
                                                                                                               AAT31151
                                                                                                                                                                   ઠે
                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequences given in AAQ86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are everatyoric layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS a comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuated encephalitis B virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polo JM;
                                                                                                                                                                   ö
                                                                                                                               51.6%; Score 29.4; DB 13; Length 48; 58.1%; Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Driver DA,
                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                          Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jolly DJ,
                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                             17 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 47
                                                                                                                                                                   12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chang SM,
                                                                                                                                                                                                                                                                                                                                       BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93US-00122791
94US-00198450
                                                       example from the invention.
                                                                                                                                                                                                                                                                                                                                     AAQ86204 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                              Local Similarity 58.1 es 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1995-131362/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
23-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                         AAQ86204;
                                                                                                                               Query Match
                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                RESULT 8
                                                                                                                                                                                                                                                                                                                     AAQ86204
```

```
primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 839-887. It was used with reverse primer HDV49-XC (AAT30850) for the FOR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SIN276-SPE (AAT31153), is used to amplify a fregment contg. Sindbis 5'-end sequences fused to HDV sequences. Overlapping synthesis is used in a second round of FCR using primers HDV4-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction region/Sindbis structural protein genes/Sindbis 3'-end untranslated region, designated pd5'-268. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 Alphavirus; Sindbis virus; vector; gene therapy; vaccine; polymerase chain reaction; PCR; primer; hepatitis delta virus; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 51.6%; Score 29.4; DB 2; Best Local Similarity 58.1%; Pred. No. 1.6e+02; Matches 18; Conservative 12; Mismatches 1
                        31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 7; Page 120; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dubensky TW, Polo JM, Ibanez CE,
Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94US-00348472.
95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95WO-US015490
                                                                                                                                                                                                                                                                                                                                                         HDV reverse primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                            AAT31151 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAT30817 standard; DNA; 52
                                                                                                                                                                                                                                                                                                  12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ribozyme; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9617072-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                    AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT30817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT30817
```

ö

ö

Gaps

ö

51.6%; Score 29.4; DB 2; Length 52; 58.1%; Pred. No. 1.6e+02; ive 12; Mismatches 1; Indels

Query Match Best Local Similarity 58.11 Matches 18; Conservative

Polo JM;

```
protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA alpha:virus structural protein expression cassettes - for producing
                                                                                                                                                                                                               DNA alpha:virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                                                                  PCR primers AAV42367-420 and AAV42422-54 are used in the course of invention. The specification describes a DNA alphavirus structural
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                         Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'Match 52, Local Similarity 58.1%; Pred. No. 1.6e+02; Local 18; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                         Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                        Jolly DJ,
                                                                                                                                                                                                                                recombinant alpha: virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jolly DJ,
                                                                                                                                                                                                                                                                   Example 3; Col 69; 140pp; English.
              94US-00198450.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-00741881.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-00122791
93US-00122791
                                                                    95US-00404796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Forward PCR primer HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42426 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chang SMW, Ibanez CE,
                                                                                                                                         Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORP.
                                                                                                                                                                         WPI; 1998-446089/38.
                                                                                                      (CHIR ) CHIRON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-446089/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHIR ) CHIRON
                18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JAN-1995;
15-MAR-1995;
 15-SEP-1993;
                                                                    15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US5789245-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV42426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV42426
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Primer SHDVIF (AAT30816) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDVI7-68 (AAT3081) and reverse primer SHDV84R (AAT30818) to generate an HDV irbozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                            Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                     vector; gene therapy; vaccine; primer; PCR; ELVIS; ribozyme; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA alphavirus, structural protein expression, inhibit, pathogen;
immune response; stimulate, PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51.6%; Score 29.4; DB 2; Length 52; 58.1%; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                          Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nested PCR primer HDV17-68 of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                          Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 3; Page 85; 256pp; English
                                                                                                                                                                                                                                                                                 94US-00348472.
95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52 BP
                                    HDV ribozyme primer HDV17-68
                                                                                                                                                                                                                                                  95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-00741881
                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON VIAGENE INC.
                                                                       Alphavirus, Sindbis virus;
                                                                                      polymerase chain reaction;
hepatitis delta virus; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
 12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 58.1
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                            Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42394 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                            Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-OCT-1996;
                                                                                                                                                                            WO9617072-A2
                                                                                                                                                                                                                                                  30-NOV-1995;
                                                                                                                                                                                                                                                                                   30-NOV-1994;
                                                                                                                                                                                                                                                                                                    18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                             06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-AUG-1998
                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV42394;
                                                                                                                                                                                                                                                                                                                                                                                                             Belli BA;
```

Query Match

ਨੇ 셤

ö

Gaps

ö

Polo JM;

2; Length 52;

```
system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral CDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral CDNA. The RNA comprises a vector construct which autonomously amplifies in the call and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an infection in vivo, especially where the immune response to an infection in vivo, especially where the immune response is a cell mediated, HLA class I-restricted or an HLA class II-restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
   specifiaction describes an eukaryotic layered vector initiation
                                                                                                                                                                                                                     Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                 Query Match 51.6%; Score 29.4; DB 2; Best Local Similarity 58.1%; Pred. No. 1.6e+02; Matches 18; Conservative 12; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POLO J M.
DUBENSKY T W.
JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRIVER D A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L8-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L5-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV60185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (DUBE/)
(JOLL/)
(DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POLO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Driver
                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                            AAV60185
 888888888888888
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                       ö
                                                             PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression casette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotic layered vector initiation system; stimulate; immune response; Sindbis; PCR primer; 86.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention.
                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                  Query Match 51.6%; Score 29.4; DB 2; Length 52; Best Local Similarity 58.1%; Pred. No. 1.6e+02; Matches 18; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                   Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jolly DJ, Dubensky TW;
                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                        31
                                                                                                                                                                                                                                                                                                                                                                          Example 3; Col 71-72; 144pp; English.
                                 Example 7; Col 103; 140pp; English.
 recombinant alpha: virus particles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-00122791.
94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV60154 standard; DNA; 52 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DUBENSKY T W.
JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POLO J M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-FEB-1994;
14-SEP-1994;
30-NOV-1994;
18-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2003
04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-SEP-1998,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV60154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POLO/) E (DUBE/) E (JOLL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                         Eukaryotic layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCR primers AAV60184-85 are used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral CDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral CDNA.
Gaps
 ö
 Indels
                                     1 TCCACCTCCTCGGGTCGGACCTGGGCATCC 31
                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dubensky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 5; Col 108; 144pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                          93US-00122791.
94US-00198450.
94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                               94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                    96US-00739158
                                                                                                                                                                                                  Reverse PCR primer HDV17-68
                                                                                                             AAV60185 standard; DNA; 52
                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                    Sindbis; PCR primer; ss
```

```
The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an infection in vivo, especially where the immune response to an infection in vivo, especially where the immune response is a cell mediated, HIA class I restricted or an HIA class II-restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                        Ouery Match 51.6%; Score 29.4; DB 2; Length 52; Best Local Similarity 58.1%; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                          Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                      18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV70746;
              8888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

Gaps

ö

1; Indels

12; Mismatches

```
Reverse PCR primer HDV17-68 used to amplify Hepatitis delta virus.
                                                          Alphavirus vector construct; gene therapy; PCR primer; ss
                                                                                                                    93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
          BP.
                                                                                                          96US-00739167
          25
                                (revised)
(first entry)
          AAV70746 standard; DNA;
                                                                                                                                                     (CHIR ) CHIRON CORP.
                                                                          Hepatitis D virus.
                                                                                                                          18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
15-MAR-1995;
                                                                                                          30-OCT-1996;
                               20-MAR-2003
02-FEB-1999
                                                                                     US5843723-A
                                                                                                01-DEC-1998
                                                                                                                     15-SEP-1993,
                                                                                                                                                                SMW,
                                                                     Synthetic
                                                                                                                                                                Chang SMW
Polo JM;
```

```
PCR primers AAV70745-46 are used to amplify part of the hepatitis delta virus (HDV) genome. The amplified product is used in the production of the alphavirus vector constructs of the invention. These constructs comprise a promoter 5' of viral a cDNA which initiates the synthesis of RNA from the viral cDNA by in vitro transcription, followed by a 5' sequence sequence encoding alphavirus nonstructural proteins, a viral junction region which has been inactivated such that viral transcription of a subgenomic fragment is prevented, an internal ribosome entry site or a subgenomic fragment is prevented, an internal ribosome entry site or a sequence which promotes ribosome read through between adjacent reading frames, and an alphavirus RNA polymerase recognition sequence. The recombinant alphavirus vectors can be used for gene therapy. (Updated on 20-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                Alphavirus vectors constructs containing a 5' promoter of viral cDNA by in vitro transcription – used in gene therapy.
Driver DA;
Belli BA, Ibanez CE,
Jolly DJ, Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 7; Col 103; 140pp; English.
                                                                                                                                                                 WPI; 1999-044581/04.
```

```
Gaps
                                                                        ö
                                           52;
                                                                          1; Indels
                                      51.6%; Score 29.4; DB 2; Length 58.1%; Pred. No. 1.6e+02; Live 12; Mismatches 1; Indels
              Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                         1 TCCACCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                   Search completed: March 15, 2005, 16:13:01
Job time: 317.25 secs
                           Ouery Match
Best Local Similarity 58.1.
Best Local 8. Conservative
X S
                                                                                                                                    원
                                                                                                          ð
```

o;

Sequence

Sequence Seguence

Sequence

Sequence

Sequence

Sequence

Sequence

Sequence Sequence Sequence Sequence

Sequence:

uo:

```
Score 16; DB 19; Length 25; Pred. No. 2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/427,808
PRIOR FILING DATE: 2002 11 20
NUMBER OF SEQ ID NOS: 982914
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
SEQ ID NO 844389
LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 844389, Application US/10719900
Publication No. US20050026164A1
APDLICANT: Nue Mei Zhou
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REFERENCE: 3528.1
CURRENT APPLICATION UNDBER: US/10/719,900
CURRENT FILING DATE: 2003-11-20
US-10-855-975-18

US-09-047-966-80

US-09-047-966-80

US-09-993-346-282

US-10-060-895A-394

US-10-060-895A-395

US-10-060-895A-1163

US-10-060-895A-1163

US-10-060-895A-1164

US-10-060-895A-1164

US-10-060-895A-1164

US-10-060-895A-1167

US-10-060-895A-1171

US-10-060-895A-1171

US-10-060-895A-1172

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1173

US-10-060-895A-1174

US-10-075-813A-1043

US-10-075-813A-1043

US-10-0895A-396

US-10-0895A-396

US-10-0895A-396

US-10-060-895A-1174

US-10-060-895A-1174

US-10-060-895A-1175

US-10-060-895A-1175

US-10-060-895A-1175

US-10-060-895A-1175

US-10-060-895A-1175

US-10-060-895A-1175

US-10-119-900-340671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-719-900-387639
; Sequence 387639, Application US/10719900
; Publication No. US20050026164A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCATGGCTAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 GCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-844389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 14; Conserval
 US-10-719-900-844389
 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 453629,
Sequence 41, Appl
Sequence 79, Appl
Sequence 79, Appl
Sequence 12150, A
Sequence 157223,
Sequence 637105,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 844389,
Sequence 387639,
                                                                                                                         March 15, 2005, 15:52:23 ; Search time 130.614 Seconds (without alignments) 910.856 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Applications NA:*

1: \cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: \cgn2_6/ptodata/1/pubpna/PCT_RMP_PUB.seq:*

3: \cgn2_6/ptodata/1/pubpna/PCT_RMP_PUB.seq:*

4: \cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*

5: \cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

6: \cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

7: \cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

8: \cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

9: \cgn2_6/ptodata/1/pubpna/US09E_PUBCOMB.seq:*

10: \cgn2_6/ptodata/1/pubpna/US09E_PUBCOMB.seq:*

11: \cgn2_6/ptodata/1/pubpna/US09E_PUBCOMB.seq:*

12: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

13: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

14: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

15: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

16: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

17: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

18: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

17: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

18: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

10: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

11: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

12: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

13: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

14: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

15: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

16: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

17: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

18: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

19: \cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*

21: \cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
                 GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-719-900-844389
US-10-719-900-844390
US-10-719-900-453629
US-10-719-900-453629
US-10-150-407-41
US-10-150-407-41
US-10-150-407-79
US-10-150-407-79
US-10-150-407-79
US-10-150-407-79
US-10-719-900-157223
US-10-719-900-157223
                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                   5537552 segs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                      bksgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                             IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                    NS-09-699-667E-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 113
113
113
113
113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14.8
113.8
113.8
113.8
113.8
113.6
113.6
```

Database

Sequence 1043, Ap Sequence 3396, Ap Sequence 397, App Sequence 398, App

Sequence

Sequence Seguence ö

Gaps

ö

0; Indels

Result

0000

307, App 387640,

Sequence

1173, Ap 142538, 499116, 659058,

Sequence

Sequence

1171,

Sequence

Length 25;

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 844390, Application US/10719900
| Sequence 1844390, Application US/10719900
| Publication No. US20050026164A1
| GENERAL INFORMATION:
| APPLICANT: Value Mei Zhou
| TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
| FILE REFERENCE: 3528.1
| CURRENT APPLICATION NUMBER: US/10/719,900
| CURRENT FILING DATE: 2003-11-20
| PRIOR APPLICATION NUMBER: 60/427,808
| PRIOR FILING DATE: 2002 11-20
| WUMBER OF SEQ ID NOS: 982914
| SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
| LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72.0%; Score 14.4; DB 19; Length 25; 81.2%; Pred. No. 1.4e+03;
                                                                                                                                                                                                                                                            74.0%; Score 14.8; DB 19; Length 25; 66.7%; Pred. No. 8.5e+02;
APPLICANT: Xue Mei Zhou
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REFERENCE: 35.28
CURRENT APPLICATION NUMBER: US/10/719,900
CURRENT FILING DATE: 2003-11-20
PRIOR PILING DATE: 2002 11 20
PRIOR FILING DATE: 2002 11 20
NUMBER OF SEQ ID NOS: 982914
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
SEQ ID NO 387639
LENGTH: 25
                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                              5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                  2 TGGGCATGGCTAAGAGAC 19
                                                                                                                                                                                                                                                                                                                               1 BKSGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 GCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCATGGCTTAGGGACC 20
                                                                                                                                                                                                                                                                          Best Local Similarity 66.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 72.0
Best Local Similarity 81.2
Matches 13; Conservative
                                                                                                                                                                                          TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-387639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-453629
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
US-10-719-900-844390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-719-900-844390
                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 41, Application US/10150407
Publication No. US20040029278A1
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBLICARTION UGSUGGASTATISTAL

GENERAL INFORMATION

APPLICANT: Polo, John M

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Ibanez, Carlos E

APPLICANT: Loaney, Stephen M.W.

APPLICANT: Chang, Stephen M.W.

APPLICANT: David A

APPLICANT: Driver, David A

APPLICANT: Driver, David A

APPLICANT: Driver, David A

APPLICANT: Belli, Barbara A

APPLICANT: Belli, Barbara A

APPLICANT: Belli, Barbara A

APPLICANT: Belli, Barbara A

APPLICANT: Driver, David A

APPLICANT: David A

FILING DATE: 1996-10-16

FRIOR APPLICATION NUMBER: 08/139,199

FRIOR APPLICATION NUMBER: 08/139,199

FRIOR APPLICATION NUMBER: 08/139,199

FRIOR APPLICATION NUMBER: 08/136,184

FRIOR FILING DATE: 1995-01-18

FRIOR FILING DATE: 1995-01-18

FRIOR APPLICATION NUMBER: 08/136,472

FRIOR APPLICATION NUMBER: 08/136,472
                                                                       ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Artificial sequence: reverse primer SHDV84R
US-10-346-880-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69.0%; Score 13.8; DB 17; Length 48; 64.7%; Pred. No. 2.7e+03; Live 5; Mismatches 1; Indels
                                                                       Indels
69.0%; Score 13.8; DB 19; 76.5%; Pred. No. 2.8e+03; tive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 41, Application US/10346880 Publication No. US20030232035A1
                                                                                                                                              4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                       7 GCCTGGCTAAGGGAACC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCGGATGGCTAAGGGA 13
                                                                       13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 64.7
Matches 11, Conservative
                                     Best Local Similarity
Matches 13; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-150-407-41/c
```

```
1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37 CTCGGATGGCTAAGGGA 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37 crcegareceraaeeaa 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 69.0°
Best Local Similarity 64.7°
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 64.7
nes 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-150-407-79/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-150-407-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S:
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Dance, Carlos E
APPLICANT: Dance, Carlos E
APPLICANT: Jolly, Douglas J
APPLICANT: Driver, David A
APPLICANT: Driver, David A
APPLICANT: Belli, Barbara A
ITLE OF INVENTION: EUKARYCTIC LAYERED VECTOR INITIATION SYSTEMS
FILE REFERENCE: PP01146.213 (CHIR-1146/11US)
CURRENT APPLICATION NUMBER: 09/503,138
FILE REFERENCE: P000-02-11
PRIOR APPLICATION NUMBER: 09/9191,747
PRIOR APPLICATION NUMBER: 09/9191,747
PRIOR APPLICATION NUMBER: 08/404,796
PRIOR APPLICATION NUMBER: 08/404,796
PRIOR PILING DATE: 1995-03-15
PRIOR PILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR APPLICATION NUMBER: 08/348,472
PRIOR APPLICATION NUMBER: 08/348,472
PRIOR APPLICATION NUMBER: 08/348,472
PRIOR APPLICATION NUMBER: 08/198,450
PRIOR APPLICATION NUMBER: 08/198,450
PRIOR APPLICATION NUMBER: 08/198,450
PRIOR APPLICATION NUMBER: 08/184
PRIOR FILING DATE: 1994-02-18
PRIOR APPLICATION NUMBER: 08/198,450
PRIOR APPLICATION NUMBER: 08/198,450
PRIOR APPLICATION NUMBER: 08/198,450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                           COMPUTE: TALALY TEACH TE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69.0%; Score 13.8; DB 17; Length 48; 64.7%; Pred. No. 2.7e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
STREET: 6300 Columbia Center, 701 Fifth Avenue CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE DESCRIPTION: SEQ ID NO: 41:
                                                                                                                                                          ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 79, Application US/10346880 Publication No. US20030232035A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO: 41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 48 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29 CTCGGATGGCTAAGGGA 13
                                                  CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 64.7°
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-346-880-79/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-150-407-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: SYSTEMS
NUMBER OF SEQUENCES: 128
                                                                                                                                                                                                                                                                                             Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                     ; FEATURE:
; OTHER INFORMATION: Artificial sequence: forward primer HDV49-XC
US-10-346-880-79
                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 13.8; DB 17; Length 56;
Pred. No. 2.7e+03;
5; Mismatches 1; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTY: US

COMPUTER READABLE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-MAY-2002
CLASSIFICATION: Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/350,522

FILING DATE: 08-041-1999

ATTORNEY/AGENT INFORMATION:
NAME: MCMASTERS, David D.
REGISTRATION NUMBER: 33,963

REFRENCE/DOCKET NUMBER: 33,963

TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6500 Columbia Center, 701 Fifth Avenue
CITY: Seattle
                                                                                                                                                                                                                                          69.0%; Score 13.8; DB 17;
64.7%; Pred. No. 2.7e+03;
tive 5; Mismatches 1;
PRIOR FILING DATE: 1993-09-15
NUMBER OF SEQ ID NOS: 128
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 79
LEACTH: 56
LEACTH: 56
TYPE: DAA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 79:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Sequence 79, Application US/10150407
; Publication No. US20040029278A1
; GENERAL INFORMATION:
```

SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1

```
ઠ
                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
    Sequence 12150, Application US/10098263B

Publication No. US20030104410A1

GENERAL INFORMATION:

APPLICANT: Mittnan, Michael

TITLE OF INVENTION: Human Microarray

FILE REFERENCE: 3118.1

CURRENT APPLICATION NUMBER: US/10/098,263B

CURRENT FILING DATE: 2003-01-08

PRIOR FILING DATE: 2001-03-16

NUMBER OF SEQ ID NOS: 131066

SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1

LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 157223/c

Sequence 157223/c

Sequence 157223/c

Publication No. US2050026164A1

GENERAL INFORMATION:

GENERAL INFORMATION:

GENERAL INFORMATION:

TITLE OF INVENTION:

TITLE OF INVENTION:

CURRENT APPLICATION NUMBER: US/10/719,900

CURRENT FILING DATE: 2003-11-20

PRIOR FILING DATE: 2002 11 20

NUMBER OF SEQ ID NOS: 982914

SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1

SEQ ID NO 157223

"ERNGIT: 25
                                                                                                                                                                                                                                                                                                                                                                                       68.0%; Score 13.6; DB 15; Length 25; 65.0%; Pred. No. 3.6e+03; ive 4; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.0%; Score 13.6; DB 19; Length 25; 60.0%; Pred. No. 3.6e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 637105. Application US/10719900
PUBDLICATION NO. US20050026164A1
GENERAL INFOATION:
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REPERENCE: 35291
CURRENT APPLICATION NUMBER: US/10/719,900
CURRENT PILING DATE: 2003-11-20
PRIOR FILING DATE: 2002-11.20
PRIOR FILING DATE: 2002-11.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TTCGAACGGTTAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 CTGGCTTGGTTAAGGGACTC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 982914
                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 65.09
Matches 13, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Homo sapien
US-10-098-263B-12150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
US-10-719-900-637105/c
US-10-098-263B-12150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-719-900-157223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
APPLICANT: Name, Stefan
APPLICANT: Hamm, Stefan
APPLICANT: Bbihara, Hideki
APPLICANT: Bbihara, Hideki
APPLICANT: Ware - Wisconsin Alumni Research Foundation
TITLE GATT.
TITLE OF INVENTION: Recombinant Influenza Vectors with A PollI Promoter and Ribozymes
TITLE OF INVENTION: Vaccines and Gene Therapy
FILE REFERENCE: 800.037US1
CURRENT APPLICATION NUMBER: US/10/855,975
CURRENT FILING DATE: 2004-05-27
PRIOR APPLICATION NUMBER: US 60/473,797
PRIOR APPLICATION NUMBER: US 60/473,797
PRIOR PILING DATE: 2003-05-28
NUMBER OF SEQ ID NOS: 37
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 18
LENGHH: 31
FLENGHH: 31
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 68.0%; Score 13.6; DB 19; Length 31; 11 Similarity 68.8%; Pred. No. 3.5e+03; 11; Conservative 4; Mismatches 1; Indels (
                                                                                                                                                      Query Match 68.0%; Score 13.6; DB 19; Length 25; Best Local Similarity 60.0%; Pred. No. 3.6e+03; Matches 12; Conservative 5; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: J. Gordon Foulkes, et al.
ATITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Medulating Gene Expression.
NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSEE: John P. White, Esq.
STREET: 1185 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTER TO USA
ZIP: 100036
CONPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; FEATURE:
; OTHER INFORMATION: A synthetic primer
US-10-855-975-18
                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-855-975-18/c
; Sequence 18, Application US/10855975
; Publication No. US20050037487A1
; GENERAL INFORMATION:
; APPLICANT: Kawaoka, Yoshihiro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Sequence 80, Application US/09047966; Publication No. US20030138773A1
                                                                                                                                                                                                                                                                     1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                 20 CTGGCATGGCTTAGGAGCCC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ::| |:|||:|||||
31 TCGGATGGCTAAGGGA 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 KSGCAUGGCUAAGGGA 17
                                                    ; TYPE: DNA
; ORGANISM: Mus musculus
US-10-719-900-637105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 11; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: New York
STATE: New York
SEQ ID NO 637105
LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-047-966-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
```

Gaps

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                         Sequence 282, Application US/09993346
Publication No. US20030124530A1
GENERAL INFORMATION:
Cantor, Charles R.
Andrews, Berh M.
Turin, Lisa M.
Fry, Kirk E.
TITLE OF INVENTION: Sequence-Directed DNA Binding
NOMBER OF SEQUENCES: 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IEAM PC compatible
COMPUTER: IEAM PC compatible
SOFTWARE: PAGENCIN BORD
SOFTWARE: PAGENCIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/993,346
FILING DATE: 13-No. US20030124530A1-2001
PRIOR APPLICATION NUMBER: 09/354,947
FILING DATE: CATION NUMBER: US 08/121,389
FILING DATE: 20-DEC-1993
APPLICATION NUMBER: US 08/123,936
FILING DATE: 27-DEC-1993
APPLICATION NUMBER: US 07/996,783
FILING DATE: 27-JUN-1991
APPLICATION NUMBER: US 07/926,783
FILING DATE: 27-JUN-1991
APPLICATION NUMBER: US 07/723,618
FILING DATE: 27-JUN-1991
ATTORNEY AGENT INFORMATION:
  Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Brady, John F.
REGISTRATION NUMBER: 39,118
REFERENCE/DOCKET NUMBER: 4600-0175.20/G19P3D1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 13.6; DB 10;
Pred. No. 3.5e+03;
4; Mismatches 3;
    .
.
                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Genelabs Technologies, Inc.
STREET: 505 Penobscot Drive
CITY: Redwood City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE DESCRIPTION: SEQ ID NO: 282: US-09-993-346-282
  4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 94063
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                       1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGACCC 20
                                                              25 GGGAAGGGCTAAGGGAGCC 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 47 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (650) 324-05
INFORMATION FOR SEQ ID NO: 282:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68.0%;
65.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 65.0°
Matches 13; Conservative
  13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGINAL SOURCE
                                                                                                                                                        US-09-993-346-282
  Matches
                                                                             g
                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                     Score 13.6; DB 10; Length 35; Pred. No. 3.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 13.6; DB 10; Length 43; Pred. No. 3.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

COMPUTER: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/047,966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 81, Application US/09047966
Publication No. US20030138773A1
GENERAL INFORMATION:
APPLICANT: J. Gordon Foulkes, et al.
TITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Methods of Transcriptionally
NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSEE: John P. White, Esq.
                                                                                                                                                                                                                                                                                                                                                                                      68.0%; Scc. 65.0%; Pred. No. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: John P. White, Esq.
STREET: 1185 Avenue of the Americas
CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NIMBER: 26134-12ZA TELECOMMUNICATION INFORMATION: TELEPHONE: 212-278-0400
MBER: US/09/047,966
03-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT AFFORMANCE: US/09/047,966
PILING DATE: 03-MAR-1998
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGGAAGGCTAAGGGAGCC 34
                                                                                                28,678
                                                                                                                   REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-278-0400
TELEPAX: 212-391-0526
                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.0%;
65.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY; linear MOLECULE TYPE: DNA (genomic)
                                 CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,
                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 35 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 65.0 Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 43 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 212-391-0526
  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-09-047-966-81/c
                                                                                                                                                                                                                                                                                                                                                               US-09-047-966-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-047-966-81
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

ö

Gaps

Wed Mar 16 10:42:52 2005

qq

Search completed: March 15, 2005, 21:09:26 Job time : 131.614 secs

```
8
12
                                                                                                                                                                                                                                                                                    March 15, 2005, 10:59:13 ; Search time 244.395 Seconds (without alignments) 900.574 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOP_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11075104
                                            GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ggguccaccuccucgcggunnnnnngggcaugcsby 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5537552 seqs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                            - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-699-667E-65
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                            OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                 Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Sequence 40, Appl	Sequence 80, Appl	Sequence 40, Appl	Sequence 80, Appl	Sequence 12, Appl	Sequence 13, Appl	7	Sequence 7, Appli	8	Sequence 6, Appli	
ΙD	US-10-346-880-40	US-10-346-880-80	US-10-150-407-40	US-10-150-407-80	US-09-733-042-12	US-09-733-042-13	US-09-190-246-2	US-10-237-302-7	US-10-237-302-8	US-10-485-281-6	US-09-190-246-4
DB	17	17	17	11	0	σ	10	15	15	18	10
Query Query Match Length DB ID	52	22	52	52	90	90	90	91	66	5451	8100
Query Match	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1
Score	30	30	30	30	30	30	30	30	30	30	30
Result No.	7	8	m	4	S	9 U	7	80	o 0	10	11

Sequence 1, Appli Sequence 39, Appl Sequence 35, Appl Sequence 37, Appl Sequence 17, Appl Sequence 117, Appl Sequence 2156, Appl Sequence 2166, Appl Sequence 34, Appl Sequence 36, Appl Sequence 36, Appl Sequence 1234, Appl Sequence 1234, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 2134, Appl Sequence 2134, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 2134, Appl Sequence 25, Appl Sequence 25756, Sequence 257756, Sequence 257756, Sequence 257757, Seq	SYSTEMS
	ALIGNMENTS  1346880  14  W.  C. LAYERED VECTOR INITIATION (CHIR-1146/11US) (719, 734) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 747) (191, 796) (192, 791) (192, 791)
	E
15538 25 83 842 842 843 1137 4711 1613 2583 2583 2583 2583 49 49 49 49 49 1005 1005 1005 1498 805 1005	tion US 0302320 0302320 07., T 0bn M Carlos
87777777777777777777777777777777777777	2011ca 1020 1020 1020 100, 0 200, 0 200, 0 200, 0 200, 0 200, 0 2111; 2110, 0 2110, 0 2100, 0 210
2 222222 22 222222 22 22222 22 22 22 22	RESULT 1  US-10-346-880-40  BOSTON OF USCO030232035A  GENERAL INFORMATION: APPLICANT: DADAS, CAIDE B  APPLICANT: DADAS, CAIDE B  APPLICANT: Thanes, CAIDE B  APPLICANT: Thanes, CAIDE B  APPLICANT: Thanes, Stephen M  APPLICANT: Thanes, Stephen M  APPLICANT: DAIDE, DAUGHS J  APPLICANT: DAIDE, DAIDE B  APPLICANT: DAIDE, DAIDE B  APPLICANT: DAIDE, DAIDE B  APPLICANT: DAIDE, DAIDE J  APPLICANT: DAIDE, DAIDE J  APPLICANT: DAIDE B  PRICE REFERENCE: PPO1146.213 (CURRENT APPLICATION NUMBER: 09/PRICE APPLICATION NUMBER: 09/PRICE APPLICATION NUMBER: 09/PRICE APPLICATION NUMBER: 09/PRICE APPLICATION NUMBER: 08/PRICE PRICE P
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	UULT 10-3 PERPER APPL APPL APPL APPL APPL APPL APPL APP
00000 00000 0000 0000	XD

ઠે 셤

```
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                              STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 56.24
Matches 18; Conservative
                                                                                                                                                                                                                         CITY: Seattle
                                                                                                                                                                                                                                                                          COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-150-407-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          USSID-346-880-80

Sequence 80, Application US/10346880

PUDLICation No. US20030232035A1

SEQUENCE INFORMATION:

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Polo, John W

APPLICANT: Chang, Stephen M.W.

APPLICANT: Chang, Stephen M.W.

APPLICANT: David A

FRIOR APPLICATION NUMBER: 09/191,747

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1994-11-30

PRIOR FILING DATE: 1994-02-18

PRIOR APPLICATION NUMBER: 08/194,450

PRIOR FILING DATE: 1994-02-18

PRIOR APPLICATION NUMBER: 08/120,791

PRIOR FILING DATE: 1994-02-18

PRIOR FILING DATE: 1993-09-15

NUMBER OF SEQ ID NOS: 128

SECONDANCE: FESTENCE FOR WINDOWN Version 3.0
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68 US-10-346-880-80
                                                                                               ; FEATURE:
; OTHER INFORMATION: Artificial sequence: nested primer HDV17-68
US-10-346-880-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81.1%; Score 30; DB 17; Length 52; 56.2%; Pred. No. 9.8;
                                                                                                                                                                                               Score 30; DB 17; Length 52
Pred. No. 9.8;
                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                              1 rccaccrccrcgcggrccgaccrgggcarccg 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match

81.1%; Score 30; DB.
Best Local Similarity 56.2%; Pred. No. 9.8;
Matches 18; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 40, Application US/10150407; Publication No. US20040029278A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 56.2
nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Unknown
                                              TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
US-10-346-880-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
US-10-150-407-40
SEQ ID NO 40
LENGTH: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
```

à 요

```
ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 80, Application US/10150407
| Publication No. US20040029278A1
| GENERAL INFORMATION:
| GENERAL INFORMATION:
| John M. | John M.
Polo, John M.
Johly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
MUNDER POLICE SEQUENCES: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

COMPUTER: IBM FC compatible

COMPUTER: IBM FC COMPATIBLE

COMPUTER: PATENTY BE FLOPPY BE FROM FLOPPY BE FLOPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.1%; Score 30; DB 17;
56.2%; Pred. No. 9.8;
iive 13; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
```

US 60/169,988

```
TYPE: DNA
CRANISM: HDV-REV
US-09-733-042-13
                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-190-246-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-237-302-7
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-09-733-042-12
Sequence 12, Application US/09733042
SEGUENCE INFORMATION:
SEQUENCE NOT Hennecke, Frank
SEPERATION NOT Replican Based Activation of Endogenous Genes
CURRENT FERRING DATE: 100001
CURRENT FILING DATE: 2000-12-11
SELOR PELLON NUMBER: US/09/733,042
SELOR FILING DATE: 1999-12-10
SERIOR FILING DATE: 1999-12-10
SERIOR SEQUENCE NOT SEQUENCE 1999-12-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 13, Application US/09733042
| Patent No. US20020168709A1
| GENERAL INFORMATION:
| APPLICANT: Hennecke, Frank
| APPLICANT: Hennecke, Wolfgang A.
| TITLE OF INVENTION: Replicon Based Activation of Endogenous Genes
| FILLE REPRENCE: 1700.0100001
| CURRENT APPLICATION NUMBER: US/09/733,042
| CURRENT FILING DATE: 2000-12-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                             PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-01-1999
ATTORNEY/AGENT INFORMATION:
NAME: MCAMBER: 33,963
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEFRANCE (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.1%; Score 30; DB 17; Length 52; 56.2%; Pred. No. 9.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81.1%; Score 30; DB 9; Length 90; 56.2%; Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22 TCCACCTCCTCGGTCCGACCTGGGCATCCG 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13; Mismatches
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                           FILING DATE: 17-May-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 56.23
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
CRGANISM: HDV-FOR
US-09-733-042-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
US-09-733-042-13/c
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 12
LENGTH: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                     Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Li, Xiaomao
APPLICANT: Li, Xiaomao
APPLICANT: Klein, Michel
TITLE OF INVENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES
FILE REFERENCE: Parrington et al.
CURRENT APPLICATION NUMBER: US/09/190,246
CURRENT FILING DATE: 1998-11-13
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 2
LENGTH: 90
                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE: OTHER INFORMATION: Description of Artificial Sequence; NOTE =
                                                                                                                                                                                                                                               Query Match 81.1%; Score 30; DB 9; Length 90; Best Local Similarity 56.2%; Pred. No. 9.7; Matches 18; Conservative 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Alphavax, Inc.
APPLICANT: Alphavax, Inc.
APPLICANT: Jonathan F. Smith
APPLICANT: Kurt I. Kamrud
APPLICANT: Sergey A. Dryga
APPLICANT: Sergey A. Dryga
APPLICANT: Ian J. Caley
TITLE OF INVENTION: ALPHAVIRUS REPLICON VECTOR SYSTEMS
FILE REFERENCE: 01113.000202
CURRENT FILING DATE: 2002-09-06
FRIOR PRILING DATE: 2001-09-06
FRIOR FILING DATE: 2001-09-06
NUMBER. OF SEQ ID NOS: 49
SOFTWARE: FastSEQ for Windows Version 4.0
IENGTH: 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 53
                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
81.1%; Score 30; DB 1
Best Local Similarity 56.2%; Pred. No. 9.7;
Matches 18; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09190246
Publication No. US20030180257A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application US/10237302 Publication No. US20030119182A1 GENERAL INFORMATION:
                                                                            PatentIn version 3.0
PRIOR APPLICATION NUMBER: US 6
PRIOR FILING DATE: 1999-12-10
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patentin version 3.0
SEQ ID NO 13
LENGTH: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TYPE: DNA
; ORGANISM: Semliki Forest virus
US-09-190-246-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Parrington, Mark
```

```
Query Match
Best Local Similarity 56.2<sup>3</sup>
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 8100
                                                                                                                                                                                                                       US-09-190-246-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-190-246-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-190-246-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 4
                                                                                            ઠે
                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/10485281

Sequence 6, Application US/10485281

Publication No. UG20040265821A1

GENERAL INFORMATION:

APPLICANT: Sandig, Volker

APPLICANT: Jordan, Ingo

TITLE OF INVENTION: Annahal Cells

CURRENT PILLING DATE: 204-01-29

FRIOR PELICATION NUMBER: PCT/DE02/02863

PRIOR PELING DATE: 2002-07-29

NUMBER OF SEQ ID NOS: 6

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 6

LENGTH: 5451
                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Vector plJO-79
US-10-485-281-6
                                                                                                                ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
OTHER INFORMATION: Description of Artificial Sequence; NOTE
OTHER INFORMATION: Synthetic Construct
                                                               ; Score 30; DB 15; Length 91; ; Pred. No. 9.7; 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 30; DB 15; Length 99;
Pred. No. 9.7;
                                                                                                                                                                                                                                                                       Sequence 8, Application US/10237302;
Sequence 8, Application US/10237302;
Publication No. US20030119182A1
GENERAL INFORMATION:
APPLICANT: AlphaVax, Inc.
APPLICANT: You T. Kamrud
APPLICANT: You T. Kamrud
APPLICANT: Sergey A. Dryga
APPLICANT: AD J. Caley
TITLE OF INVENTION: ALPHAVINUS REPLICON VECTOR SYSTEMS
FILE REFERENCE: 01113.000202
CURRENT APPLICATION NUMBER: 60/317,722
PRIOR FILING DATE: 2001-09-06
NUMBER OF SEQ ID NOS: 49
SOFTWARE: FestSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13; Mismatches
, OTHER INFORMATION: Synthetic Construct
US-10-237-302-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.1%;
56.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                    81.1%;
nilarity 56.2%;
Conservative 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 56.2<sup>3</sup>
Matches 18; Conservative
                                                                                          Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-237-302-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-485-281-6
                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                             Matches
                                                                                                                                                            ठे
                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/09190246;
Sequence 1, Application WS/09190246;
Publication No. US20030180257A1
GENERAL INFORMATION:
APPLICANT: Barrington, Mark
APPLICANT: Li, Xiaomao
APPLICANT: Klein, Michel
TILE REPERBNCE: Parrington et al.
CURRENT APPLICATION NUMBER: US/09/190,246
CURRENT FILING DATE: 1998-11-13
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Parrington, Mark
APPLICANT: Parrington, Mark
APPLICANT: Li, Xiaomao
APPLICANT: Li, Xiaomao
APPLICANT: Li, Xiaomao
APPLICANT: Li, Xiaomao
TITUE OF INVENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES
FILE REFERENCE: Parrington et al.
CURRENT APPLICATION NUMBER: US/09/190,246
CURRENT FILING DATE: 1998-11-13
NUMBER OF SEQ ID NOS: 1998-11-13
SOFTWARE: Patentin Ver. 2.0
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81.1%; Score 30; DB 10; Length 15538; 56.2%; Pred. No. 8.4;
           DB 18; Length 5451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 8100;
                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81.1%; Score 30; DB 10; 56.2%; Pred. No. 8.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12479 TCCACCTCCTCGCGGTCCGACCTGGGCATCG 12510
                                                                                                                                                                                                                                                                                   5002 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 5033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ## second to the second second
                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNGGGCAUGCS 35
81.1%; Score 30; DB 1
56.2%; Pred. No. 8.6;
ive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 39, Application US/09507362; Publication No. US20030096397A1; GENERAL INCEMATION: APPLICANT: Dubensky Jr., Thomas W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4, Application US/09190246; Publication No. US20030180257A1; GENERAL INFORMATION;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Semliki Forest virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Semliki Forest virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18; Conservative
```

us-09-699-667e-65.std.rnpb

```
Query Match 76.8%; Score 28.4; DB 18; Length 2583; Best Local Similarity 50.0%; Pred. No. 35; Matches 18; Conservative 14; Mismatches 4; Indels 0;
                                                                                        CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/391,441
FILING DATE: 17-Mar-2003
FILING DATE: 17-Mar-2003
FILING DATE: 17-Mar-2003
FILING DATE: 18-Peb-2000
FILING DATE: 18-Peb-2000
ATTORNEY ABELICATION NUMBER: US/09/507,362
FILING DATE: 18-Peb-2000
ATTORNEY ABENT INFORMATION:
NAME: McMasters, David D.
REFERENTE NUMBER: 33-963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELEPHONE: (206) 622-4900
TELEPAX: (206) 622-4900
TELEPAX: (206) 622-4900
TELEPAX: C106) 682-6031
INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; FEATURE:
; OTHER INFORMATION: Artificially generated oligonucleotide
US-10-441-926-35
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
CERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: NOSS, Howard A.
APPLICANT: Mullins, James I.
TITLE OF INVENTION: ANGESTRAL VIRUSES AND VACCINES
FILE REFERENCE: 08987-011001
CURRENT APPLICATION NUMBER: US/10/441,926
CURRENT FILING DATE: 2003-05-19
PRIOR FILING DATE: 2001-02-18
PRIOR FILING DATE: 2000-02-18
NUMBER: OF SEQ ID NOS: 42
SOFTWARE: FSSESS for Windows Version 4.0
SEQ ID NO 35
LENGTH: 2583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2525 GGGTGCACCTCCTCGTCGATCTCGGGCATGGCG 2490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 17;
23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27 TCCACCTCCTCGGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78.4%; Score 29; 58.6%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Search completed: March 15, 2005, 15:52:12 Job time : 249.395 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 35, Application US/10441926 Publication No. US20040115621A1 GENERAL INFORMATION: APPLICANT: Rodrigo, Allen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 58.6
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-441-926-35/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ,
;:
ਨਹ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ublication no. work.

GENERAL INFORMATION:
APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
                                                                                                                                                      WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSER: Seed Intellectual Property Law Group PLLC STREET: 701 Fifth Avenue, Suite 6300
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                     Frolov, 11ya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
78.4%; Score 29; DB 10; Length 56;
Best Local Similarity 58.6%; Pred. No. 23;
Matches 17; Conservative 12; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMULCATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
COMPUTER: TBM FC compatible
OPERATING SYSTEM: FC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-Feb--2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27 TCCACCTCCTCGGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                       Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
                                                                                                                                                                           SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 39, Application US/10391441
Publication No. US20030232058A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IELEFAX: (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 39
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Seattle
STATE: Washington
COUNTRY: USA
ZIP: 96104-7092
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                            STATE: Washington
COUNTRY: USA
ZIP: 98104-7092
                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

ö

ö

ö

Сарв

ö

## OTASU) NNALB 3DAY SIHT

- nucleic search, using sw model OM nucleic

March 15, 2005, 15:52:23 ; Search time 241.636 Seconds
 (without alignments)
910.856 Million cell updates/sec Run on:

US-09-699-667E-65 37 Title: Perfect score:

1 ggguccaccuccucgcggunnnnnnngggcaugcaby 37 Sequence:

IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Scoring table:

5537552 segs, 2974263231 residues Searched:

5307542 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 60

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

Published Applications NA:\*

1: /cgn2\_6/ptodata/1/pubpna/US07\_PUBCOMB.seq:\*
2: /cgn2\_6/ptodata/1/pubpna/PCT NEW PUB.seq:\*
3: /cgn2\_6/ptodata/1/pubpna/US06\_PUBCOMB.seq:\*
4: /cgn2\_6/ptodata/1/pubpna/US06\_PUBCOMB.seq:\*
5: /cgn2\_6/ptodata/1/pubpna/US07\_PUBCOMB.seq:\*
6: /cgn2\_6/ptodata/1/pubpna/US08\_PUBCOMB.seq:\*
7: /cgn2\_6/ptodata/1/pubpna/US08\_PUBCOMB.seq:\*
8: /cgn2\_6/ptodata/1/pubpna/US08\_PUBCOMB.seq:\*
9: /cgn2\_6/ptodata/1/pubpna/US08\_PUBCOMB.seq:\*
11: /cgn2\_6/ptodata/1/pubpna/US09\_PUBCOMB.seq:\*
12: /cgn2\_6/ptodata/1/pubpna/US09\_PUBCOMB.seq:\*
13: /cgn2\_6/ptodata/1/pubpna/US09\_PUBCOMB.seq:\*
14: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
15: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
16: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
16: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
17: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
18: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
19: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
19: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
20: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
21: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
22: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
22: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

					SUMMAKTES		
Result No.	Score	% Query Match	% Query Match Length DB ID	DB	·	Description	
1	30	81.1	52	17	US-10-346-880-40	Sequence 40, Appl	
73	30	81.1	52	17	US-10-346-880-80	Sequence 80, Appl	
e	30	81.1	52	17	US-10-150-407-40	Sequence 40, Appl	
4	30	81.1	52	17	US-10-150-407-80	Sequence 80, Appl	
S	29	78.4	26	10	US-09-507-362-39	Sequence 39, Appl	
9	29	78.4	26	17	US-10-391-441-39	Sequence 39, Appl	
7	27.	73.0	49	σ	US-09-812-186-5	Sequence 5, Appli	
80	27	73.0	49	10	US-09-961-077-1234	Sequence 1234, Ap	
0	27	73.0	49	13	US-10-103-480-9	Sequence 9, Appli	
10	27	73.0	49	15	US-10-156-433-38	Sequence 38, Appl	
11	27	73.0	49	16	3 US-10-112-814-38	Sequence 38, Appl	

Sequence 29, Appli Sequence 7, Appli Sequence 18125, A Sequence 381, App Sequence 382, App Sequence 381, App Sequence 381, App	82893	Sequence 97, Appl Sequence 704, App Sequence 8, Appli Sequence 19, Appl Sequence 19, Appl	Sequence 19, Appl Sequence 118, App Sequence 106, App Sequence 107, App Sequence 108, App Sequence 6071, App Sequence 6071, App	Sequence 3, Appli Sequence 3, Appli Sequence 256, App Sequence 256, App Sequence 256, App Sequence 80, Appl Sequence 22, Appl Sequence 21, Appl Sequence 212, Appl Sequence 212, Appl
US-10-363-552-29 US-09-991-262-7 US-09-991-262-7 US-09-864-636A-381 US-09-864-636A-381 US-09-864-426A-381 US-09-864-426A-381	US-10-084-839-381 US-10-084-839-382 US-10-719-900-867275 US-09-999-220B-28 US-09-999-220B-85	US-09-999-220B-97 US-10-813-638-704 US-09-884-464-8 US-10-136-841-19 US-10-272-531A-19	S-10-272-483A-1 S-10-628-109-111 S-10-628-109-101 S-10-628-109-101 S-10-628-109-101 S-09-908-975-601 S-09-908-975-201	US-08-978-806-3 US-09-972-834-3 US-10-670-184-161 US-10-126-022-256 US-10-1393-815-80 US-10-244-715-22 US-10-224-6833-45 US-10-035-833A-3718
1100011	16 16 10 10	10 18 14 17	1188111	8 9 117 117 117 117
99999999999999999999999999999999999999	33 25 31 31	31 51 29 46	8 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
00000000000000000000000000000000000000		8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	00000000000000000000000000000000000000	57.8 57.8 57.8 57.8 57.3 57.3
222 22	22 22 21.8 21.8 21.8	21.8 21.8 21.6 21.6 21.6	21.6 21.6 21.6 21.6 21.6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
C 12 C 14 C 15 C 15 C 17	C 19 C 21 C 22 C 23		00000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

# ALIGNMENTS

RESULT 1

US-10-346-880-40

i Sequence 40. Application US/10346880

i Publication No. US20030213035A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Dubensky Jr., David A

APPLICANT: Daily, Douglas J

APPLICANT: Daily, David A

PRIOR APPLICATION NUMBER: 09/191, 747

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR PILING DATE: 1996-10-30

PRIOR PILING DATE: 1994-11-30

PRIOR PILING DATE: 1994-11-30

PRIOR PILING DATE: 1994-11-30

PRIOR FILING DATE: 1994-11-30

PRIOR PILING DATE: 1994-12-31

PRIOR PILING DATE: 1994-13-31

PRIOR PILING D

```
APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                  CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Polo, John M
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A
APPLICANT: Briver, David A
APPLICANT: Belli, Barbara A
APPLICANT: Belli, Barbara A
APPLICANT: Belli, Barbara A
APPLICANT: PPOLICATION WINDER: US/10/346,880
CURRENT APPLICATION WINDER: US/10/346,880
                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68 US-10-346-880-80
                                                                                                  ; FEATURE:
; OTHER INFORMATION: Artificial sequence: nested primer HDV17-68
US-10-346-880-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.1%; Score 30; DB 17; Length 52; 56.2%; Pred. No. 9.8; tive 13; Mismatches 1; Indels
                                                                                                                                                                                                       81.1%; Score 30; DB 17; Length 52; 56.2%; Pred. No. 9.8; 1; Indels iive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                  1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/346,080
PRIOR APPLICATION NUMBER: 09/503,138
PRIOR FILING DATE: 2000-02-11
PRIOR FILING DATE: 2000-02-11
PRIOR FILING DATE: 1998-11-12
PRIOR FILING DATE: 1998-10-30
PRIOR PILING DATE: 1996-10-30
PRIOR PLING DATE: 1996-10-30
PRIOR PLING DATE: 1996-10-30
PRIOR PLING DATE: 1996-01-15
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1994-11-30
PRIOR FILING DATE: 1994-11-30
PRIOR FILING DATE: 1994-12-30
PRIOR FILING DATE: 1994-02-18
PRIOR FILING DATE: 1994-02-18
PRIOR FILING DATE: 1993-09-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 80, Application US/10346880 Publication No. US20030232035A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
US-10-150-407-40
; Sequence 40, Application US/10150407
; Publication No. US20040029278A1
; GENERAL INFORMATION:
                                                                                                                                                                                                       Query Match
Best Local Similarity 56.24
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 56.2.
Best Local 18; Conservative
                                              TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-346-880-80
SEQ ID NO 40
                           LENGTH: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 80, Application US/10150407

Publication No. US20040029278A1

GENERAL INFORMATION:

Date John M.

Johly, Douglas J.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS

NUMBER OF SEQUENCES:

CORRESPONDENCE ADDRESS:

ADDRESSEE: SEED and BERRY LLP

STREET: 6300 Columbia Center, 701 Fifth Avenue

COUNTRY: US

ZIP: 98104-7095

COUNTRY: US

ZIP: 98104-7095

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible

COMPUTER: IBM PC Compatible

COMPUTER: SEATING SYSTEM: PC Compatible

COMPUTER: SEATING SYSTEM: PC COMPATION

SOFTWARE: PatentIn Release #1.0, Version #1.25
Polo, John M.
Jolly, Douglas J.
Driver, David A.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 81.1%; Score 30; DB 17; Length 52; Best Local Similarity 56.2%; Pred. No. 9.8; Matches 18; Conservative 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: MCMARETER, DAVID D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049,423D1 / 1146.010
                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 17-May-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATE:
PAPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Uul-1999
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
TOPOLOGY: linear
;
SEQUENCE DESCRIPTION: SEQ ID NO: 40: US-10-150-407-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (206) 682-6
INFORMATION FOR SEQ ID NO: 40:
```

us-09-699-667e-65.siz.rnpb

```
Ouery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                   RESULT 6
US-10-391-441-39
                                                                                    US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-391-441-39
                                                                                                                                Query Match
                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Seattle
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-Feb-2000
CLASSIFICATION: CUNTROM: CLASSIFICATION: APPLICATION: AUDKNOWN>
                                                                           PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Jul-1999
ATTORNEY/AGENT INFORMATION:
NAME: MCMBETERS, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 93,0049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81.1%; Score 30; DB 17; Length 52; 56.2%; Pred. No. 9.8; ive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFRENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
               APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
                                                                                                                                                                                                                                                       TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 39, Application US/09507362 Publication No. US20030096397A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                       TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                         LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Inte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 56.2
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
```

```
Dryga, Sergey A.
Frolov, IIIA
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Seattle
STATE: Washington
COUNTRY: USA
COUNTRY: USA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/391,441
FILING DATE: 17-Mar-2003
CLASSIFICATION: cUnknown>
                                                                                                                                   Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: MCMASters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                              DB 10;
23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78.4%; Score 29; DB 17;
58.6%; Pred. No. 23;
tive 12; Mismatches 0
                                                                                                                              78.4%; Score 29; DB 58.6%; Pred. No. 23; ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-Feb-2000
                                                                                                                                                                                                                                                 27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNGGGCAU 32
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                        Sequence 39, Application US/1039141
Publication No. US2003232058A1
GENERAL INFORMATION:
APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                   Best Local Similarity 58.68 Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
```

```
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                       yequence 5, Application US/09812186
patent No. US20020052037A1
general information:
GAPLICANT: BEIGELMAN, LEONID
TITLE OF INVENTION: WUCLEIC ACID CATALYSTS COMPRISING L-NUCLEOTIDE ANALOGS
FILE REFERENCE: MBHB00-922-A
CURRENT APPLICATION NUMBER: 08/09/812,186
CURRENT APPLICATION NUMBER: 60/042,464
PRIOR APPLICATION NUMBER: 60/042,464
PRIOR APPLICATION NUMBER: 09/048,825
PRIOR APPLICATION NUMBER: 09/048,825
PRIOR PILING DATE: 1998-03-25
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PATENT VET. 1098-03-25
SOFTWARE: PATENT VET. 2.0
SEQ ID NO 5
LENGTH: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence: Hepatitis CTHER INFORMATION: Delta Virus (HDV) Ribozyme.
NAME/KEY: misc_feature
LOCATION: (18)...(24)
OTHER INFORMATION: all n's can represent any one of a, c, g, or use-09-812-186-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Skyut, Thomas A.
Skyut, Thomas A.
Young, Scott A.
Folkerts, Otto
Merlo, Donald Composition AND METHODS FOR
MODULATION OF GENE EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 73.0%; Score 27; DB 9; Le Best Local Similarity 100.0%; Pred. No. 1.3e+02; Matches 27; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM_Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: WORD Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/961,077
FILING DATE: 21-Sep-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1214, Application US/09961077
Publication No. US20030014775A1
GENERAL INFORMATION: Wichael G.
APPLICANT: Zwick, Michael G.
Edington, Brent E.
McSwiggen, James A.
Mexlo, Patricia Ann Owens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNGGGC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 UCCACCUCCUCGCGGUNNNNNNGGGC 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 633 West Fifth Street
Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IN PLANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: LOB Angeles STATE: California COUNTRY: U.S.A. ZIP: 30071-2066 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: RNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-09-961-077-1234
                                                   US-09-812-186-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
```

ò

```
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Enzymatic Nucleic Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 9, Application US/10103480

Sequence 9, Application US/10103480

Publication No. US2002019268511

GENERAL INFORMATION:

APPLICATE Thompson, Jim

TITLE OF INVENTION: Method For Target Site Selection and Discovery

TITLE OF INVENTION: MHENO, 1286-A 900/001

CURRENT FILING DATE: 2002-01-21

PRIOR APPLICATION NUMBER: US 09/112,086

PRIOR APPLICATION NUMBER: US 09/112,086

PRIOR APPLICATION NUMBER: US 09/108,087

PRIOR PELLING DATE: 1998-06-30

PRIOR PELLING DATE: 1998-06-30

PRIOR PELLING DATE: 1998-06-30

PRIOR FILING DATE: 1998-06-30

PRIOR FILING DATE: 1998-06-30

PRIOR FILING DATE: 1908-07-03

NUMBER OF SEQ ID NOS: 15

SOFTWARE: Patentin version 3.0

LENGTH. 40

LENGTH. 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) OTHER INFORMATION: The letter "N" stands for any base. SEQUENCE DESCRIPTION: SEQ ID NO: 1234: US-09-961-077-1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 73.0%; Score 27; DB 13; Length 49; Best Local Similarity 100.0%; Pred. No. 1.3e+02; Matches 27; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73.0%; Score 27; DB 10; 1
100.0%; Pred. No. 1.3e+02;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature; LOCATION: (18)...(24); CTHER INFORMATION: n stands for any a, c, g, or u US-10-103-480-9
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/679,645

FILING DATE: JULY 12, 1996

APPLICATION NUMBER: 60/001,135

FILING DATE: JULY 13, 1995

APPLICATION NUMBER: 08/300,726

FILING DATE: September 2, 1994

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                      NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 219/247
TELECOMUNICATION INFORMATION:
TELEPHONE: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 UCCACCUCCUCGCGGUNNNNNNGGGC 28
                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 1234:
SEQUENCE CHARACTERISTICS:
LENGTH: 49 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: RNA
ORGANISM: Artificial Sequence
```

2 UCCACCUCCUCGCGGUNNNNNGGGC 28

g

```
; Sequence 38, Application US/10112814
; Publication No. US20330170644A1
; Publication No. US20330170644A1
; CENERAL INFORMATION:
    APPLICANT: Bargin
    APPLICANT: Leonid, Beigelman
    APPLICANT: Laurent, Bellon
    TILE REFERENCE: MHHB00-943-D; 400.005
    CURRENT APPLICATION NUMBER: US/10/112,814
    CURRENT PILING DATE: 2002-03-29
    FRIOR PILIOR DATE: 1998-12-18
    PRIOR FILING DATE: 1998-12-18
    PRIOR PILING DATE: 1998-12-18
    PRIOR PILING DATE: 1998-12-19
    PRIOR PILING DATE: 1999-12-19
    PRIOR PILING DATE: 1997-12-19
                                                                                                                           APPLICANT: Beigelman, Leonid
APPLICANT: Beigelman, Leonid
APPLICANT: Beigelman, Leonid
APPLICANT: Beilon, Laurent
APPLICANT: Sinnen, Shawn
APPLICANT: Ribozyme Pharmaceuticals, Inc.
TITLE OF INVENTION: Method for Screening Nucleic Acid Catalysts
FILE REPRENCE: MBHB00-943-E 560.007)
CURRENT APPLICATION NUMBER: US/10/156,433
CURRENT PILING DATE: 2002-05-28
PRIOR APPLICATION NUMBER: US 10/112,814
PRIOR FILING DATE: 1998-12-18
PRIOR FILING DATE: 1998-12-18
PRIOR FILING DATE: 1998-06-09
PRIOR FILING DATE: 1998-06-09
PRIOR FILING DATE: 1997-12-19
PRIOR FILING DATE: 1997-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 73.0%; Score 27; DB 15; Length 49; Best Local Similarity 100.0%; Pred. No. 1.3e+02; Matches 27; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: (18)..(24)
OTHER INFORMATION: n stands for any nucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Enzymatic Nucleic Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNGGGC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 UCCACCUCCUCGCGGUNNNNNNGGGC 28
; Sequence 38, Application US/10156433; Publication No. US20030144489A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 72
SOFWARE: Patentin version 3.1
SEQ ID NO 38
LENGTH: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                   GENERAL INFORMATION:
APPLICANT: Burgin, Alex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
US-10-112-814-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-156-433-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IYPE: RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
NAME/KEY: misc_feature
i LOCATION: (18)..(24)
cother information: n stands for any nucleotide, or any chemically modified nucleotide
US-10-112-814-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 29, Application US/10363552
| Publication No. US20040132028A1
| Publication No. US20040132028A1
| GENERAL INFORMATION:
| APPLICANT: STUMPP, MICHAEL TOBIAS
| TITLE OF INVENTION: MODULES
| TITLE OF INVENTION: MODULES
| TITLE OF INVENTION: MODULES
| FILE REPERENCE: 37629-0075: US/10/363,552
| CURRENT APPLICATION NUMBER: PCT/EP01/10454
| PRIOR APPLICATION NUMBER: PCT/EP01/10454
| PRIOR PILING DATE: 2003-11-24
| NUMBER OF SEQ ID NOS: 77
| SOFTWARE PARENTE: PARENTING DATE: 2001-09-10
| SEQ ID NO 29
| LENGTH: 32
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
ADDRESSE: Flehr Hobbach Test Albritton & Herbert LLP
STREET: Four Embarcadero Center, Suite 3400
CITY: San Francisco
STRATE: California
COUNTRY: United States
ZIP: 94111-4187
COMPUTER READABLE FORM:
WEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 77, Application US/09991262;
Publication No. US20030041349A1;
GENERAL INFORMATION:
APPLICANT: Christian, P. D., Gordon, K. H.J., Hanzlik, T. N.
TITLE OF INVENTION: Insect Viruses and Their Uses in
Protecting Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Synthetic OTHER INFORMATION: oligonucleotide
                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 32;
                                                                                                                                                                                                                                                                             Length 49;
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 60.5%; Score 22.4; DB 18; Best Local Similarity 50.0%; Pred. No. 7.4e+03; Matches 16; Conservative 10; Mismatches 6;
                                                                                                                                                                                                                                                                        Query Match 73.0%; Score 27; DB 16; 1
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 27; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          || ||| |: |:|| || :::::: ||||:|| || 32 GGACCAGGCTGTGTG 1
                                                                     FEATURE:
OTHER INFORMATION: Enzymatic Nucleic Acid
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                             2 UCCACCUCCUCGCGGUNNNNNNGGGC 28
                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNGGGC 30
                        TYPE: RNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JS-10-363-552-29/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-363-552-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-991-262-7
LENGTH: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
59.5%; Score 22; DB 10; Length 33; 53.3%; Pred. No. 1e+04; tive 9; Mismatches 5; Indels
                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Third Wave Technologies
APPLICANT: Allwal, Hatim
APPLICANT: Bartholomay, Christian
APPLICANT: Bartholomay, Christian
APPLICANT: Chebak, LuAnne
TITLE OF INVENTION: Detection of RNA Sequences
FILE REFERENCE: PORS-0494, 636A
CURRENT APPLICATION NUMBER: US/09/864,636A
CURRENT PILING DATE: 2002-10-15
NUMBER OF SEQ ID NOS: 2640
SOFTWARE: PatentIn version 3.0
SEQ ID NO 381
LENGTH: 33
                                              2 GGUCCACCUCCUCGCGGUNNNNNNNNNNGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGUCCACCUCCUCGCGGUNNNNNNGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Search completed: March 15, 2005, 21:09:25 Job time : 242.636 secs
                                                                                                                                                                                           Sequence 381, Application US/09864636A, Publication No. US20030104378A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 53.3%
Matches 16; Conservative
                                                                                                                                                                       US-09-864-636A-381/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-864-636A-381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                       ઠે
                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18325, Application US/09908975

Sequence 18325, Application US/09908975

Publication No. U520030165843A1

GENERAL INFORMATION:

APPLICANT: SHOSHAN, Avi

APPLICANT: MINTZ, Eli

APPLICANT: MINTZ, Liac

ITILE OF INVENTION: THAT POPULATE A TRANSCRIPTS AND SPLICE

TITLE OF INVENTION: THAT POPULATE A TRANSCRIPTS AND SPLICE

FILE REFERENCE: 3668-0005

CURRENT APPLICATION NUMBER: US/09/908,975

CURRENT FILING DATE: 2001-07-20

PRIOR PILING DATE: 2001-05-02

PRIOR PILING DATE: 2000-07-28

PRIOR PILING DATE: 2000-07-28

NUMBER OF SEQ ID NOS: 33337

SOFTWARE: Patentin version 3.0

SEOFTWARE: Patentin version 3.0

SEOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 60.5%; Score 22.4; DB 10; Length 39; Best Local Similarity 58.3%; Pred. No. 7.3e+03; Matches 14; Conservative 9; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60.5%; Score 22.4; DB 10; Length 60; 50.0%; Pred. No. 7.2e+03; ive 10; Mismatches 6; Indels
PatentIn Release #1.0, Version #1.30
            CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/991_262
FILING DATE: 20-00. US20030041349A1-2001
CLASSIFICATION: cUnknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/234,238
FILING DATE: 20-JAN-1999
APPLICATION NUMBER: US 08/485,355
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/40,522
FILING DATE: 12-MAY-1995
APPLICATION NUMBER: US 08/40,522
FILING DATE: 08-JUL-1993
APPLICATION NUMBER: US 08/089,372
FILING DATE: 08-JUL-1993
APPLICATION NUMBER: US 08/089,372
FILING DATE: 14-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Trecartin, Richard P.
REGISTRATION NUMBER: 31,801
REPERBUNCE/DOCKET NUMBER: A-58631-3/RFT/DSS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; SEQUENCE DESCRIPTION: SEQ ID NO: 7: US-09-991-262-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16 CCTCCTCGCGGCGCCGGATGGGCA 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 CCUCCUCGCGGUNNNNNNGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 50.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-908-975-18325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-908-975-18325/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
```

Gaps

.. 0 us-09-699-667e-64.std.rnpb

```
Sequence 3, Appli
Sequence 153, App
Sequence 153, App
Sequence 231346,
Sequence 231346,
Sequence 1, Appli
Sequence 5, Appli
Sequence 5, Appli
                                                                                                                                                                                            March 15, 2005, 10:59:13 ; Search time 132.105 Seconds (without alignments) 900.574 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_MEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
6: /cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
7: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/USOB_NEW_PUB.seq:*
8: /cgn2_6/ptodata/1/pubpna/USOB_NEW_PUB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOB_NEW_PUB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOB_NEW_PUB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOB_NEW_PUB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOB_NEW_PUB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11075104
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-996-015-3
US-10-287-190-167
US-10-307-817-153
US-10-723-860-2320
US-10-027-632-231346
US-10-027-632-231346
US-09-993-966-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5537552 segs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                    1 ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                 US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.0 20190
85.0 20190
85.0 20190
85.0 135005
84.0 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16.8
16.8
16.8
16.8
16.8
16.8
                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
```

, Ap	ď	pli	<u>,</u>	۸ 		۸.	Α.	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	App	
6			4	340	322	98682	m	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	281,	æ	æ	8	8	8	B	œ	281,		
quence	Sequence	Seguence	Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	equenc	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Seguence	Seguence	Seguence	Sequence	
09-738-626-2	-10-494-541-	-09-738-6	-10-719-900-	-10-719-993-5340	-10-424-599-5322	-10-027-632-98	-027-632-9868	-09-946-374	-006-856A-2	US-10-006-818A-281	-485A-28	-10-013-907A-28	-10-015-499A-28	-10-015-393A-2	-10-015-869A-28	-10-012-121A-2	6-116A-2	$\sim$	-10-017-527A-2	-10-013-913A-2	-10-007-194A-2	-10-013-430A-2	-10-011-671A-2	-10-012-755A-2	-10-015-386A-2	11-692A-2	-10-006-768A-2	-10-017-610A-28	-10-006-063A-2	0-063A-	-10-015-391A-2	-10-017-407A-2	US-10-011-833A-281	
σ	13	σ		18			17		14	14	14		14	14	14	14	14	14	14	14	14	14	14	14	14	12		12		12	12	12	12	
1380	1543	3309400	25	201	442	708	708	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	32	32	2	32	32	32	2320	32	
	ς.	ä	。	6.	6	6	9	ę.	6	9	٩.	6	6	٥.	e,	6.	6	٥.	6	ď.	6	6	٩.	6	6	φ.	٥.		٥.		ę.	79.0		
16.4	ė.	ė.	16	5	ñ.	5.	•	5.	5.	•	ď.	ī.	'n.	S.	'n.	'n.	ď.	ď.		'n.	'n.						'n.	٠	'n.		'n	15.8	ů.	
12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	53	30	31	32	33	34	35	36		38			41		43	44	45	
		υ		υ		υ	O	υ	υ	υ	U	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	O	

## ALIGNMENTS

```
ö
                                                                                                                                                                                                                                                      တဲ
                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo sapiens
FRATURE:
NAME/KN: misc feature
LOCATION: (2206)
OTHER INFORMATION: Wherein n is A, C,
RESULT 1
US-09-996-015-3
'Sequence 3, Application US/0996015
'Publication No. US20030032166A1
                           GENERAL INFORMATION:
APPLICANT: Quinn, Kerry E.
APPLICANT: Pena, Carol A. E.
                                                                                                                                                                                                                                                              FEATURE:
```

Sequence 93, 1 Sequence 286,

US-09-374-046A-93 US-10-616-263-93 US-10-085-117-286

84.0 1859 84.0 2922 84.0 2922 84.0 202802

COCATION:

```
ö
FILE REFERENCE: 21402-780B
CURRENT APPLICATION NUMBER: US/10/287,190
CURRENT FILING DATE: 2003-04-02
PRIOR APPLICATION NUMBER: 09/996,015
PRIOR PILING DATE: 2001-11-28
PRIOR PILING DATE: 2001-11-05
PRIOR PLING DATE: 2001-11-05
PRIOR PLING DATE: 2001-11-03
PRIOR FILING DATE: 2001-11-20
PRIOR FILING DATE: 2001-11-28
PRIOR FILING DATE: 2001-06-07
PRIOR FILING DATE: 2002-08-07
PRIOR FILING DATE: 2002-08-07
PRIOR FILING DATE: 2002-08-07
PRIOR FILING DATE: 2001-11-29
NUMBER OF SEQ ID NOS: 194
SEQ ID NO 167
LENGRAFIL: CURASEGLIST VERSION 0.1
LENGRAFIL: AND 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ϋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEATURE:
NAME/KRY: CDS
LOCATION: (1).. (2202)
FEATURE:
NAME/KRY: misc feature
NAME/KRY: misc feature
OTHER: INFORMATION: (2206).
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: (2222)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
LOCATION: (2224)..(2224)
OTHER INFORMATION: Wherein n may be a,
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature
LOCATION: (2207)..(2207)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (2214)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRATURE:
NAME/KREY: misc_feature
LOCATION: (2218). (2218)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
NAME/KEY: misc_feature
LOCATION: (2220)..(2220)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
LOCATION: (2221)..(2221)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ซ้
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
LOCATION: (2215)..(2215)
OTHER INFORMATION: Wherein n may be a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
LOCATION: (2209)..(2209)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: (2211)..(2211)
OTHER INFORMATION: Wherein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-287-190-167; Application US/10287190; Sequence 167, Application US/10287190; Publication No. US20040038230A1; GENERAL INFORMATION: A APPLICANT: Alsobrook II, John P. et al.; TITLE OF INVENTION: THERAPEUTIC FOLYPEPTIDES, NUCLEIC ACIDS ENCODING SAME, AND METHOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 85.0%; Score 17; DB 10; Length 20190; Best Local Similarity 88.2%; Pred. No. 54; Matches 15; Conservative 2; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or T
                                                                                                                                                                                                                                                                                                                                                                                               or T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature

1 LOCATION: (2230)

2 OTHER INFORMATION: Wherein n is A, C, G, or T

US-09-996-015-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                 or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          တဲ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           တဲ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σÌ
                                                                                                                                             υ
                                                                                                                                                                                                                                                                                                                 ပဲ
                                                                                                                                                                                                                                                                                                                                                                                               ບັ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ບັ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ပဲ
                                                          ပဲ
                                                                                                                                                                                                                              υÌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ບັ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ပဲ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ပဲ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature
LOCATION: (2225)
OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                       ION: (2214)
INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc feature
COCATION: (2215)
THER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc feature
LOCATION: (2218)
OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc feature
LOCATION: (2220)
OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: (2221)
OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: (2222)
OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (2227)
OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: (2229)
OTHER INFORMATION: Wherein n is A,
                                  LOCATION: (2207)
OTHER INFORMATION: Wherein n is A,
FEATURE:
                                                                                                                                         OTHER INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION: Wherein n is A,
                                                                                                                                                                                                                            INFORMATION: Wherein n is A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20059 GGCGCATGGCTAAGGGA 20075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc_feature
LOCATION: (2224)
                                                                                                                                                                                  NAME/KEY: misc feature
LOCATION: (2211)
                                                                                               NAME/KEY: misc feature
LOCATION: (2209)
                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
```

g ઠે

```
Sequence 2320, Application US/10723860
; Bequence 2320, Application US/10723860
; Bublication No. US20040253606A1
; Bublication No. US20040253606A1
; GENERAL INFORMATION:
APPLICANT: Azia', Natasha
; APPLICANT: Ginsburg, Wendy
; APPLICANT: Glotnik, Albert
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
; TITLE OF INVENTION: WHORE: US/10/723,860
; CURRENT APPLICATION NUMBER: US/10/723,860
; CURRENT APPLICATION NUMBER: 60/429,739
; PRIOR FILING DATE: 2002-11-26
; PRIOR FILING DATE: 2002-11-26
; ROWERS OF SEQ ID NOS: 8393
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 2320
; LENGTH: 135005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 17; DB 18; Length 135005;
Pred. No. 47;
2; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85.0%; Score 17; DB 17; Length 20190; 88.2%; Pred, No. 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc feature
COCATION: (2230)...(2230)...
COTHER INFORMATION: Wherein n may be a, c, g or t
                                                            u
                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Mismatches
                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                               a,
                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ď
                   NAME/KEY: misc_feature
LOCATION: (2220)..(2220)
OTHER INFORMATION: Wherein n may be
                                                                              FEATURE:
NAME/KEY: misc feature
LCAN-LVEY: (2221).
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
LOCATION: (2224)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                  FEATURE:
NAME: NAME:
NAME: COCATION: (2226)..(2226)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
NAME/KEY: misc_feature
LOCATION: (2227)..(2227)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature
LOCATION: (2229)..(2229)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                           þę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       108776 GGCGCATGCTAAGGGA 108760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20059 GGCGCATGCCTAAGGGA 20075
                                                                                                                                                                                  NAME/KEY: misc feature
LOCATION: (2222)
OTHER INFORMATION: Wherein n may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGCGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85.0%;
88.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 88.2
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 88.2
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rype: DNA CORGANISM: Homo sapiens US-10-723-860-2320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
US-10-723-860-2320/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 153, Application US/10307817
Publication No. US20040058338A1
GENERAL INFORMATION:
APPLICANT: Age et al.
TITLE OF INVENTION:
NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
FILE REPERENCE: 21402-502C
CURRENT APPLICATION NUMBER: US/10/307,817
CURRENT FILING DATE: 2002-12-02
NUMBER OF SEQ ID NOS: 682
SOFTWARE: CuraSeqList version 0.1
LENGTH: 20199
                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                        85.0%; Score 17; DB 17; Length 20190; 88.2%; Pred. No. 54;
                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc feature
LOCATION: (2218)...(2218)
OTHER INFORMATION: Wherein n may be a, c, g or
                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                           ; NAME/KEY: misc_feature
; LOCATION: (2230)..(2230)
; OTHER INFORMATION: Wherein n may be a, c, g US-10-287-190-167
                                                                                                                                                                                                              b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                   2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      b
                                                        FEATURE:
NAME/KEY: misc_feature
LOCATION: (2227). (2227)
OTHER INFORMATION: Wherein n may be a,
FEATURE:
NAME/KEY: misc_feature
LOCATION: (2229)..(2229)
OTHER INFORMATION: Wherein n may be a,
                                             ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc_feature
LOCATION: (2211)..(2211)
OTHER INFORMATION: Wherein n may be
NAME/KEY: misc feature
LOCATION: (2226)..(2226)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc feature
LOCATION: (2206)..(2206)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: (2207)..(2207)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature
LOCATION: (2209)..(2209)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
LOCATION: (2214)..(2214)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
LOCATION: (2215)..(2215)
OTHER INFORMATION: Wherein n may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20059 GGCGCATGCCTAAGGGA 20075
                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGCGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 88.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: (1)..(2202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
US-10-307-817-153
```

셤 ð

ö

ö

```
Sequence 1, Application US/0993966;
Sequence 1, Application US/0993966;
Publication No. US20030186232A1
GENERAL INPORMATION:
TITLE OF INVENTION: HUMAN AND NON-HUMAN PRIMATE HOMOLOGUES OF NKD PROTEIN,
TITLE OF INVENTION: HUMAN AND NON-HUMAN PRIMATE HOMOLOGUES OF NKD PROTEIN,
TITLE OF INVENTION: UNCLEIC AID SEQUENCES ENCODING, AND USES THEREOF
FILE REFERENCE: 014024/0280733
CURRENT APPLICATION NUMBER: 60/292, 966
CURRENT FILING DATE: 2001-11-27
PRIOR APPLICATION NUMBER: 60/225, 884
PRIOR APPLICATION NUMBER: 60/221, 109
PRIOR FILING DATE: 2001-05-16
PRIOR FILING DATE: 2001-10-01
NUMBER OF SEQ ID NOS: 26
SOFTWARE PATENTION VOWER: 60/225, 571
SROW PRIOR FILING DATE: 2001-10-01
SEQ THANKE: PATENTION VOWER: 60/225, 571
FRIOR FILING DATE: 2001-10-01
SEQ THANKE: PATENTION VOWER: 60/225, 571
CHARACTER. PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHNSTON INFORMATION:
JOHNSTON MICHAEL
JITLE OF INVENTION: HUMAN AND NON-HUMAN PRIMATE HOMOLOGUES OF NKD PROTEIN,
JITLE OF INVENTION: NUCLEIC CAID SEQUENCES ENCODING, AND USES THEREOF
JITLE OF INVENTION: NUCLEIC CAID SEQUENCES ENCODING, AND USES THEREOF
FILE REFERENCE: 014024/0280733
CURRENT APPLICATION NUMBER: US/099,993,966
JENOR APPLICATION NUMBER: G0/252,884
PRIOR PILING DATE: 2000-11-27
PRIOR PELING DATE: 2000-11-27
PRIOR PELING DATE: 2001-05-16
PRIOR FILING DATE: 2001-05-16
PRIOR FILING DATE: 2001-00-10
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver: 2.1
SEG ID NO 5-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1786;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84.0%; Score 16.8; DB 10; Length 1859;
                                                                                                                            Length 572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                        Score 16.8; DB 17;
Pred. No. 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 16.8; D
Pred. No. 80;
2; Mismatches
                                                                                                                                                                                                                     1; Mismatches
                                                                                                                                                                                                                                                                                                                                                           120 GGCACAGGCTAAGGGACCC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117 GGCGCATGCTTAGGGACGC 136
                                                                                                                                                                                                                                                                                                          1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-993-966-5
, Sequence 5, Application US/09993966
, Publication No. US20030186232A1
, GENERAL INFORMATION:
                                                                                                                                 84.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84.0%;
                                                                                                                            Query Match
Best Local Similarity 85.0°
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 80.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Homo sapiens
US-09-993-966-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Homo sapiens
, ORGANISM: Human
US-10-027-632-231346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-993-966-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    임
                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                 Sequence 231346, Application US/10027632

Publication No. US20020198371A1

JEBRERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
FILE REFERENCE: 108827.129
CURRENT FILING DATE: 2002-04-30
FRIOR APPLICATION NUMBER: US 60/218,006
FRIOR FILING DATE: 2000-09-12
FRIOR FILING DATE: 2000-09-20
FRIOR FILING DATE: 2000-04-20
FRIOR FILING DATE: 2000-04-20
FRIOR FILING DATE: 2000-04-20
FRIOR FILING DATE: 2000-03-29
FRIOR FILING DATE: 2000-03-29
FRIOR FILING DATE: 1999-11-23
FRIOR FILING DATE: 1999-11-23
FRIOR FILING DATE: 1999-11-23
FRIOR FILING DATE: 1999-08-08
FRIOR FILING DATE: 1999-08-08-08
FRIOR FILING DATE: 1999-08-08-08-08
FRIOR FILING DATE: 1999-08-08-08-08
FRIOR FILING DATE: 1999-08-08-08-08
FR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6

US-10-027-632-231346/C

§ Sequence 231346, Application US/10027632

§ Sequence 231346, Application US/10027632

§ Sequence 231346, Application US/10027632

§ Publication No. US20030264075A9

§ GENERAL INFORMATION:

§ TITLE OF INVENTION: Identification and Mapping of Single Nucleotide

§ TITLE OF INVENTION: Polymorphisms in the Human Genome

§ TITLE OF INVENTION: Polymorphisms in the Human Genome

§ TITLE OF INVENTION: POlymorphisms in the Human Genome

§ FILE REPRENCE: 108027.129

© CURRENT PILING DATE: 2000-04-30

§ PRIOR PELING DATE: 2000-04-20

§ PRIOR APPLICATION NUMBER: US 60/199,676

§ PRIOR APPLICATION NUMBER: US 60/195,218

§ PRIOR PELING DATE: 2000-03-29

§ PRIOR PELING DATE: 2000-03-24

§ PRIOR PELING DATE: 12000-02-4

§ PRIOR PELING DATE: 1999-11-23

§ PRIOR APPLICATION NUMBER: US 60/156,358

§ PRIOR APPLICATION NUMBER: US 60/166,025

§ PRIOR PELING DATE: 1999-09-26

§ PRIOR PELING DATE: 1999-09-09

§ PRIOR PILING DATE: 1999-09-09

§ SOFTWARE: FastESQ for Windows Version 4.0

§ SEQ ID NO 231346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13; Length 572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       84.0%; Score 16.8; D
85.0%; Pred. No. 87;
tive 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 GGCACAGGGCTAAGGGACCC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 gecechugecunnegenece 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 85.vv
Best Local 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-027-632-231346
```

g

ö

Gaps

Gaps

```
publication No. US20032334A1
GENERAL INFORMATION:
APPLICANT: MOTIS, Davi Enc K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR CANCER
FILE REFERENCE: 22945200121
CURRENT FILING DATE: 2002-02-27
PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2002-03-02
NUMBER OF SEQ ID NOS: 361
SOFTWARE: PSECSEQ for Windows Version 4.0
SEQ ID NO 286
LENGTH: 202802
                                                                                                                                                                        Query Match

84.0%; Score 16.8; DB 17; Length 2922;
Best Local Similarity 80.0%; Pred. No. 78;
Matches 16; Conservative 2; Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84.0%; Score 16.8; D
80.0%; Pred. No. 58;
tive 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: OZAKI, AKTO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: UP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR FILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: UP 00/159162
PRIOR FILING DATE: 2000-04-07
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PATENTIN OF: 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2903, Application US/09738626
Publication No. US20020197605A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16256 GGCACATGGCTAGGGGACCC 16237
                                                                                                                                                                                                                                                                                                                                                 2466 GGCGCATGCCTTAGAGACCC 2485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 286, Application US/10085117
Publication No. US20030232334A1
                                                                                                                                                                                                                                                                                                          1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: NAKAGAWA, SATOSHI
APPLICANT: MIZOGUCHI, HIROSHI
APPLICANT: ANDO, SEIKO
APPLICANT: HAYASHI, MIKIKO
APPLICANT: OCHIAI, KEIKO
APPLICANT: YATASHI, MIXOO
APPLICANT: YATESHI, NAKOO
APPLICANT: SENOH, AKIHIRO
APPLICANT: SENOH, AKIHIRO
APPLICANT: IKEBA, MASATO
APPLICANT: IKEBA, MASATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 80.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
CORGANISM: Homo sapiens
US-10-085-117-286
                                                      TYPE: DNA
ORGANISM: Homo Bapiens
US-10-616-263-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
US-10-085-117-286/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-738-626-2903
SEQ ID NO 93
LENGTH: 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           원
                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                  oʻ
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Jacobs, Kenneth
APPLICANT: Jacobs, Kenneth
APPLICANT: Jacobs, John M.
APPLICANT: Lavalile, Edward R.
APPLICANT: Colling-Racie, Lisa A.
APPLICANT: Evans, Cheryl
APPLICANT: Teacy, Maurice
APPLICANT: Maninger II, Robert J.
APPLICANT: Secining vikki
APPLICANT: Glark, Hilary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Pechtel, Kind Applicant: Pechtel, Kind Applicant: Pechtel, Kind Applicant: Genetics Institute, Inc.
TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM PILE REPERENCE: 00766.000103.5
CURRENT APPLICATION NUMBER: US/10/616,263
CURRENT FILING DATE: 2003-07-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                  Gaps
                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10; Length 2922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                  Indels
                                  5,
Best Local Similarity 80.0%; Pred. No. 80; Matches 16; Conservative 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match

Best Local Similarity 80.0%; Pred. No. 78;
Matches 16; Conservative 2; Mismatches
                                                                                                                                                                                                                                                                                                    Sequence 93, Application US/09374046A Publication No. US20030096951A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2466 GGCGCATGGCTTAGAGACCC 2485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Agostino, Michael J.
Steininger II, Robert J.
Spaulding, Vikki
Wong, Gordon G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 93, Application US/10616263 Publication No. US20040038276A1 GENERAL INFORMATION:
                                                                                                                                  182 GGCGCATGCTTAGGGACGC 201
                                                                                            1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Jacobs, Kenneth
PRPLICANT: MCCOV, John M.
APPLICANT: LaVallie, Edward R.
APPLICANT: Collins-Racie, Lisa A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 93
LENGTH: 2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Merberg, David
Treacy, Maurice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Evans, Cheryl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
US-09-374-046A-93
                                                                                                                                                                                                                                              RESULT 9
US-09-374-046A-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-616-263-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                           g
                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

ö

Gaps

ô

Indels

Length 202802;

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                              Pompejus, Markus
APPLICANT: Schroder, Hartwig
APPLICANT: Kroger, Burkhard
APPLICANT: Klopprogge, Corinna
APPLICANT: Klopprogge, Corinna
APPLICANT: Haberhauer, Gregor
TITLE OF INVENTION: Genes coding for proteins for genetic stability,
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for proteins for Gregor
TITLE OF INVENTION: Genes coding for genetic stability,
TITLE OF INVENTION: Genes coding for genes genes coding for genes coding for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 16.4; DB 19; Length 1543;
Pred. No. 1.3e+02;
                                                                                                                                                                 Query Match 82.0%; Score 16.4; DB 9; Length 1380; Best Local Similarity 83.3%; Pred. No. 1.38+02; Matches 15; Conservative 2; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
82.0%; Score 16.4; D
Best Local Similarity 83.3%; Pred. No. 1.3e
Matches 15; Conservative 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: NOVEL POLYNUCLECTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
                                                                ) ORGANISM: Corynebacterium glutamicum
US-09-738-626-2903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/09738626 Publication No. US20020197605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        161 GGCTCATGGCTAAGGGAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    294 GGCTCATGGCTAAGGGAC 311
                                                                                                                                                                                                                                                                                                                 1 GGCGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGCGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: NAKAGAWA, SATOSHI
APPLICANT: MIZOGUCHI, HIROSHI
APPLICANT: ANDO, SEIKO
APPLICANT: HAYASHI, MIKIRO
APPLICANT: OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YOKOI, HARUHIKO
TATEISHI, NAOKO
SENOH, AKIHIRO
IKEDA, MASATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: (101)..(1513)
OTHER INFORMATION: RXA00314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-09-738-626-1/c
LENGTH: 1380
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-494-541-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 82.0%; Score 16.4; DB 9; Length 3309400; 1. Similarity 83.3%; Pred. No. 74; 15; Conservative 2; Mismatches 1; Indels 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-10-719-900-844389
is Sequence 844389, Application US/10719900
j Sequence 844389, Application US/10719900
j Publication No. US20050026164A1
j GENERAL INFORMATION:
j APPLICANT: Xue Mei Zhou
j TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
j FILE REFERENCE: 35281
j CURRENT APPLICATION NUMBER: US/10/719,900
j PRIOR PILING DATE: 2003-11-20
j PRIOR PILING DATE: 2002-11-20
j PRIOR FILING DATE: 2002-11-20
j RUMBER OF SEQ ID NOS: 982914
j SOGTWARE: Microarray Probe Sequence Listing Generator V 1.1
i LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80.0%; Score 16; DB 19; Length 25
87.5%; Pred. No. 2.8e+02;
tive 2; Mismatches 0; Indels
                                      PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PATENTE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search completed: March 15, 2005, 15:52:07 Job time : 139.105 secs
APPLICATION NUMBER: JP 99/377484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA; OCKYNEbacterium glutamicum US-09-738-626-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2809618 GGCTCATGGCTAAGGGAC 2809601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGCGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 GCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCATGGCTAAGGGACC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 87.5
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-844389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 15; Conserv
```

```
March 15, 2005, 15:52:23 ; Search time 130.614 Seconds (without alignments) 910.856 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                5307542
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                5537552 segs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                               - nucleic search, using sw model
                                                                                                                                                                                                                                                                                            1 ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                                                                                       IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                  US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0 Maximum DB seq length: 60
```

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Published Applications NA:\*

1: /cgn2\_6/ptodata/1/pubpna/NSO7\_PUBCOMB.seq:\*
2: /cgn2\_6/ptodata/1/pubpna/RPCT MEW PUB.seq:\*
4: /cgn2\_6/ptodata/1/pubpna/NSO6\_NEW PUB.seq:\*
5: /cgn2\_6/ptodata/1/pubpna/USO6\_NEW PUB.seq:\*
6: /cgn2\_6/ptodata/1/pubpna/USO6\_NEW PUB.seq:\*
7: /cgn2\_6/ptodata/1/pubpna/NSO8\_NEW PUB.seq:\*
6: /cgn2\_6/ptodata/1/pubpna/NSO8\_NEW PUB.seq:\*
7: /cgn2\_6/ptodata/1/pubpna/USO8\_PUBCOMB.seq:\*
8: /cgn2\_6/ptodata/1/pubpna/USO8\_PUBCOMB.seq:\*
9: /cgn2\_6/ptodata/1/pubpna/USO8\_PUBCOMB.seq:\*
11: /cgn2\_6/ptodata/1/pubpna/USO9\_PUBCOMB.seq:\*
12: /cgn2\_6/ptodata/1/pubpna/USO9\_PUBCOMB.seq:\*
13: /cgn2\_6/ptodata/1/pubpna/USO9\_PUBCOMB.seq:\*
14: /cgn2\_6/ptodata/1/pubpna/USO9\_PUBCOMB.seq:\*
15: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
16: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
17: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
18: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
19: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
19: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
10: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
11: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
12: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
13: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
14: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
15: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
16: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
17: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
18: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
19: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
10: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
11: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
12: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
13: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
14: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
15: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\*
16: /cgn2\_6/ptodata/1/pubpna/USOP\_PUBCOMB.seq:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Regult 2

					_	_	_	_			_	
Description	Sequence 844389,	Sequence 844390,	Seguence 54, Appl	Seguence 54, Appl	Sequence 1546, Ap	Sequence 1546, Ap	Sequence 4139, Ap	Sequence 1956, Ap	Sequence 387639,	Sequence 453629,	Sequence 11788, A	
ΩI	US-10-719-900-844389	US-10-719-900-844390	US-09-882-246-54	US-10-681-822-54	US-09-740-332-1546	US-09-817-879-1546	US-10-669-841-4139	US-09-940-185-1956	US-10-719-900-387639	US-10-719-900-453629	US-09-908-975-11788	
DB	13	13	σ	18	10	10	18	10	19	19	10	
Query Match Length DB	25	25	37	37	17	17	17	24	25	25	9	
Query Match	80.0	72.0	71.0	71.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	
Score	16	14.4	14.2	14.2	13.8	13.8	13.8	13.8	13.8	13.8	13.8	
		۸,	_				_	_		_		

Sequence 204642, Sequence 788103, Sequence 80, Appl	e 33, e 81,	394	<b>~~~</b>	116	116	e 116 e 117	117		sequence essuss, Sequence 18, Appl Sequence 307, App	41,	79, AF 1857,	e 1857, e 12150,	Sequence 1857, Ap Sequence 62677, A
US-10-719-900-204642 US-10-719-900-788103 US-09-047-966-80	-10-146-835-3 -09-047-966-8	.10-060-895A-3	US-10-060-895A-396 US-10-331-907-306 US-10-060-895A-1163	55	-10-060-895A-116 -10-060-895A-116	-10-060-895A-1 -10-060-895A-1	-10-060-895A-117	-10-060-895A-117 -10-719-900-4991	-900-65905 -975-18 -907-307	US-10-346-880-41 US-10-150-407-41 US-10-346-880-79	-10-150-407-7 -09-864-636A-	-864-426A-18 -098-263B-12	US-10-084-839-1857 US-10-719-900-62677
			15 16 15		4						4	11	
355	8 4 4 3 5 5 7	17,	17 20 25	25	2 2 2 2 2 2 2 2	22 2	2 2 2	2 2 2	3 1 4 0	4 4 R	200	22 22 22	25
68.0 68.0 68.0	0.89	67.0	67.0 67.0 67.0	67.0	67.0	67.0	67.0	67.0	67.0 67.0 67.0	67.0	67.0	66.0 66.0	66.0 66.0
13.6 13.6 13.6			13.4 13.4	13.4					13.4 13.4 4.4.4	13.4		13.2	
13	16	18	20 21 22	223	26	28 29	31	332	2 2 2 4 7 6	337	4 4 0 1	4 4 4 8	4 4 7 C
υ	υυ							υ	υ	υυι	υυυ	υ	υυ

# ALIGNMENTS

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
RESULT 1
US-10-719-900-844389

Sequence 844389, Application US/10719900

Publication No. US20050026164A1

GENERAL INFORMATION:

APPLICANT: Xue Mei Zhou

TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REFERENCE: 3258.1

CURRENT APPLICATION NUMBER: US/10/719,900

CURRENT APPLICATION NUMBER: 60427,808

PRIOR PILING DATE: 2002 11.20

NUMBER: OF SEQ ID NOS: 982914

SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1

SEQ ID NO 844389
                                                                                                                                                                                                                                                                                                                                                                                                                                 80.0%; Score 16; DB 19; Length 25; 87.5%; Pred. No. 2.8e+02; ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 GCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 GCATGGCTAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14; Conservative
                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Mus musculus
US-10-719-900-844389
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 14; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       යු .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
```

ö

RESULT 2 US-10-719-900-844390

; Sequence 844390, Application US/10719900 ; Publication No. US20050026164A1 ; GENERAL INFORMATION:

Gaps

. 0

```
71.0%; Score 14.2; DB 9; Length 37; 84.2%; Pred. No. 2.2e+03; Live 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 10-Aug-2003
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: NUMBER: US/09/093,293
FILING DATE: 08-June 1998
APPLICATION NUMBER: 1996
APPLICATION NUMBER: PCT/US94/10542
FILING DATE: 03 August 1996
APPLICATION NUMBER: PCT/US94/10542
FILING DATE: 18 September 1994
APPLICATION NUMBER: 108/123,935
FILING DATE: 17 September 1993
APPLICATION NUMBER: 08/123,935
FILING DATE: 17 September 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SYSTEMATIC EVOLUTION OF LIGANDS BY EXPONENTIAL ENRICHMENT: PHOTOSELECTION OF NUCLEIC ACID LIGANDS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSE: Swanson & Bratschun, L.L.C.
STREET: 8400 B. Prentice Avenue, Suite 200
CITY: Englewood
STATE: Colorado
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Diskette, 3.5 inch, 1.44 MG
                   REGISTRATION NUMBER: 33,215
REFERENCE/DOCKET NUMBER: NEX10/US-CON
TELEPHONIONICATION INFORMATION:
TELEPHONE: (303) 793-3333
TELEFAX: (303) 793-433
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
LENGTH: 37 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDENESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 8.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/681,822
                                                                                                                                                                                                                                       ;
TOPOLOGY: linear
;
SEQUENCE DESCRIPTION: SEQ ID NO: 54:
US-09-882-246-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 10 JUNE 1991
APPLICATION UNBER: 07/536,428
FILING DATE: 11 JUNE 1990
APPLICATION NUMBER: 07/931,473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 25 October 1993
APPLICATION NUMBER: 07/714,131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 54, Application US/10681822; Publication No. US/20040132067A1
GENERAL INFORMATION:
APPLICANT: GOLD, LARRY
MILLIS, MICHAEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KOCH, TAD
RINGQUIST, STEVEN
         NAME: Barry J. Swanson
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12 gececaceavaagaaacc 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 80111
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 84.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-681-822-54
                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                        72.0%; Score 14.4; DB 19; Length 25; 81.2%; Pred. No. 1.8e+03;
APPLICANT: Xue Mei Zhou
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REFERENCE: 35-28
CURRENT APPLICATION NUMBER: US/10/719,900
CURRENT FILING DATE: 2003-11-20
PRIOR APPLICATION NUMBER: 60/427,808
PRIOR FILING DATE: 2002 11 20
NUMBER OF SEQ ID NOS: 982914
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
SEQ ID NO 844390
LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENČE ADDRESS:
ADDRESSEE: Swanson & Bratschun, L.L.C.
STREET: 8400 B. Prentice Avenue, Suite 200
CITY: Englewood
STATE: Colorado
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENRICHMENT: PHOTOSELECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 80111
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 MG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 14-Jun-2001
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/093,293
FILING DATE: «Unknown»
APPLICATION NUMBER: PCT/US94/10542
FILING DATE: 18 September 1994
APPLICATION NUMBER: 08/123,935
FILING DATE: 17 September 1993
APPLICATION NUMBER: 08/143,564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIGANDS BY EXPONENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATKINSON, BRENT
TITLE OF INVENTION: SYSTEMATIC EVOLUTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: MS-DOS
SOFTWARE: WORDERFECT 8.0
CURRNT APPLICATION DATA:
APPLICATION NUMBER: US/09/882,246
                                                                                                                                                                                                                                                                                                                                                                                                     2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 25 OCCODER 1993
APPLICATION NUMBER: 07/714,131
FILING DATE: 10 JUNE 1991
APPLICATION NUMBER: 07/536,428
FILING DATE: 11 JUNE 1990
APPLICATION NUMBER: 07/931,473
FILING DATE: 17 AUGUST 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Sequence 54, Application US/09882246
; Patent No. US20020106652A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: GOLD, LARRY
WILLIS, MICHAEL
KOCH, TAD
RINGQUIST, STEVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 GCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCATGGCTTAGGGACC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JENSEN, KIRK
                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 81.2
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM
                                                                                                                                                                                                                                                            TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-844390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
US-09-882-246-54
                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ଚ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
APPLICANT: Parela, ravco
APPLICANT: Parela, ravco
APPLICANT: Partice, Lee
APPLICANT: Renneth, Draper
APPLICANT: Renneth, Draper
APPLICANT: Renneth, Roberts
APPLICANT: Renneth, Roberts
APPLICANT: Risaber, Roberts
TITLE OF INVENTION: UNIGNEDIATED INHIBITION OF HEPATITIS B VIRUS AND HEPA)
TITLE OF INVENTION: VIRUS REPLICATION
FILLS OF APPLICATION WUMBER: US (0/20-69-69)
FRIOR APPLICATION WUMBER: US (0/315, 05-9)
FRIOR APPLICATION WUMBER: US (0/313, 05-9)
FRIOR APPLICATION WUMBER: US (0/313, 05-9)
FRIOR APPLICATION WUMBER: US (0/358, 580
FRIOR APPLICATION WUMBER: US (0/358, 580
FRIOR APPLICATION WUMBER: US (0/358, 124
FRIOR PILING DATE: 2001-03-06
FRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/611, 931
FRIOR FILING DATE: 2000-03-07
FRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/611, 931
FRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/611, 931
FRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/614, 321
FRIOR FILING DATE: 2000-03-07
FRIOR PRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/614, 321
FRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/614, 321
FRIOR FILING DATE: 2000-03-07
FRIOR FILING DATE: 2000-03-07
FRIOR APPLICATION WUMBER: US (09/614, 321)
FRIOR FILING DATE: 2000-03-07
FRIOR FILING DATE: 
                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence: Nucleic Acid FEATURE:
                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                       Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 13.8; DB 18; Length 17; Pred. No. 3.8e+03;
                                                                                                                                                                                                                                                                                                              Indele
                                                                                                                                                                                                                             Score 13.8; DB 10;
Pred. No. 3.8e+03;
; TYPE: RNA

; ORGANISM: artificial sequence

; PEATURE:

; NAME/KEY: misc_feature

; LOCATION:

; CTHER INORMATION:

; OTHER 105NATION:

0S-09-817-879-1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: oligonucleotide substrate
                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4139, Application US/10669841 Publication No. US20040127446A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Sirna Therapeutics, Inc.
APPLICANT: Lawrence, Blatt
APPLICANT: Dennis, Macejak
                                                                                                                                                                                                                                                                                                                                                                           17
                                                                                                                                                                                                                                                                                                                                                                                                                                        1 Gecuceucecuaagega 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: RNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69.0%;
88.2%;
                                                                                                                                                                                                                                                Query Match
Best Local Similarity 88.2%;
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                           1 GGCGCAUGGCUAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      James, McSwiggen
David, Morrissey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1546, Application US/09740332
Publication No. US20030125270A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Bnzymatic Nucleic Acid Treatment of Diseases or Conditions Relate TITLE OF INVENTION: Hepatitis C Virus Infection
TITLE OF INVENTION: Hepatitis C Virus Infection
TITLE OF INVENTION: Hepatitis C Virus Infection
CURRENT APPLICATION NUMBER: US/09/740,332
CURRENT FILING DATE: 2001-03-26
NUMBER OF SEQ ID NOS: 9704
SCOTWARR: Patentin version 3.0
SEQ ID NO 1546
LENGTH: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1146, Application US/09817879
Publication No. US20030171311A1
GENERAL INFORMATION:
APPLICANT: RIDOZYME Pharmaceuticals Inc.
TITLE OF INVENTION: Enzymatic Nucleic Acid Treatment of Diseases or Conditions Relate TITLE OF INVENTION: Hepatitis C Virus Infection
FILE REFERENCE: MBHB00-801-F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71.0%; Score 14.2; DB 18; Length 37; 84.2%; Pred. No. 2.2e+03; 1ve 0; Mismatches 3; Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 69.0%; Score 13.8; DB 10; Best Local Similarity 88.2%; Pred. No. 3.8e+03; Matches 15; Conservative 0; Mismatches 2;
                                                                                REGISTRATION NUMBER: 33,215
REFERENCE/DOCKET NUMBER: NEX10/US-CON
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 793-3333
TELEFAX: (303) 793-3433
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
LENGTH: 37 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: oligonucleotide substrate
                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 54:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/817,879
CURRENT FILING DATE: 2001-03-26
NUMBER OF SEQ ID NOS: 9703
SOFTWARE: PatentIn version 3.0
SEQ ID NO 1546
LENGTH: 17
FILING DATE: 17 AUGUST 1992
ATTORNEY/AGENT INFORMATION:
NAME: Barry J. Swanson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12 GGCGCACGGAUAAGGAACC 30
                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 decucaucecuaaceca 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 84.29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
US-09-740-332-1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-740-332-1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
US-09-817-879-1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-681-822-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
```

g ઠે

```
Publication No. US20050026164A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
    ö
    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
    .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
US-10-719-900-387639
Sequence 387639, Application US/10719900
Sequence 387639, Application US/10719900
Publication No. US20050026164A1
GENERAL INFORMATION:
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
TITLE REFERENCE: 3528.1
CURRENT PILING DATE: 2003-11-20
PRIOR APPLICATION NUMBER: 60/427,808
PRIOR PILING DATE: 2003-11-20
PRIOR FILING DATE: 2003-11-20
NUMBER OF SEQ ID NOS: 982914
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 25;
                                                                                                                                                                          Sequence 1956, Application US/09940185
; Bequence 1956, Application US/09940185
; Publication No. US20030096239A1
; GENERAL INFORMATION:
; APPLICANT: Gunderson, Kevin
; APPLICANT: Gunderson, Kevin
; TITLE OF INVENTION: Probes and Decoder Oligonucleotides
; FILE REFERENCE: A-69605-1
; CURRENT APPLICATION NUMBER: US/09/940,185
; CURRENT FILING DATE: 2001-08-27
; PRIOR APPLICATION NUMBER: US 60/227,948
; PRIOR PELING DATE: 2000-08-25
; PRIOR APPLICATION NUMBER: US 60/228,854
; PRIOR PELING DATE: 2000-08-29
; NUMBER OF SEQ ID NOS: 4768
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1956
    2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Computer Generated Probe Sequence. US-09-940-185-1956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69.0%; Score 13.8; DB 19;
76.5%; Pred. No. 3.7e+03;
Mismanatiches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 69.0%; Score 13.8; DB 10;
Best Local Similarity 82.4%; Pred. No. 3.7e+03;
Matches 14; Conservative 1; Mismatches 2;
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-10-719-900-453629
Sequence 451629, Application US/10719900
    ö
                                            1 GGCGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GCGCAACGCTAAGGGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GGGCATGGCTAAGAGAC 19
                                                                                  1 Gecuceucecuakacica 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GCGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GCGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 76.5
Matches 13, Conservative
    15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Mus musculus
US-10-719-900-387639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 387639
LENGTH: 25
                                                                                                                                                                   US-09-940-185-1956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                            ઠે
                                                                              셤
```

```
US-09-908-975-11788
US-09-908-975-11788
US-09-908-975-11788
US-09-908-975-11788
I SEQ ID NO US20030165843A1
I SEQ ID NO 11788
                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
GENERAL INFORMATION:

APPLICANT: Xue Mei Zhou
TILLE OF INVENTE: 328.4.

TILLE OF INVENTE: 3528.4.

CURRENT APPLICATION NUMBER: US/10/719,900

CURRENT TILLE DATE: 2003-11-20

PRIOR PPLICATION NUMBER: 60/427,808

PRIOR PILING DATE: 2002 11 20

NUMBER OF SEQ ID NOS: 982914

SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1

LENGTH: 25
                                                                                                                                                                                                                                                                                                     Length 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 60;
                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 204642, Application US/10719900
Publication No. US20050026164A1
GENERAL INFORMATION
APPLICANT: Nue Mei Zhou
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REFERENCE: 3528.1
CURRENT FILING DATE: 2003-11-20
PRIOR APPLICATION NUMBER: 60/427,808
                                                                                                                                                                                                                                                                                                   69.0%; Score 13.8; DB 19; 76.5%; Pred. No. 3.7e+03; tive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69.0%; Score 13.8; DB 10; 76.5%; Pred. No. 3.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                       7 GCCTGGCTAAGGGAACC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23 GGCGCATGGCTTGGGGA 39
                                                                                                                                                                                                                                                                                                                                                                                 4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGCGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 76.5
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 76.5
Matches 13; Conservative
                                                                                                                                                                                                                             TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-453629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
CRGANISM: Homo sapiens
US-09-908-975-11788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-719-900-204642/c
```

us-09-699-667e-64.siz.rnpb

```
US-10-146-835-33
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                     Sequence 788103
Sequence 788103, Application US/10719900
Publication No. US20050026164A1
GENERAL INFORMATION:
HEDDICANT: Xue Mei Zhou
TITLE OF INVENTION: Methods of Genetic Analysis of Mouse
FILE REFERENCE: 3528.1
CURRENT PILING DATE: 2003-11-20
PRIOR PPLICATION NUMBER: US/10/719,900
CURRENT FILING DATE: 2003-11-20
PRIOR FILING DATE: 2002 11 20
NUMBER OF SEQ ID NOS: 982914
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
SEQ ID NO 788103
LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68.0%; Score 13.6; DB 19; Length 25; 75.0%; Pred. No. 4.7e+03; tive 1; Mismatches 4; Indels (
                                                                                                                                                                                             Query Match 68.0%; Score 13.6; DB 19; Length 25; Best Local Similarity 70.0%; Pred. No. 4.7e+03; Matches 14; Conservative 2; Mismatches 4; Indels
PRIOR FILING DATE: 2002 11 20
NUMBER OF SEQ ID NOS: 982914
SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
SEQ ID NO 204642
LENGTH: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Batentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/047,966 FILING DATE: 03-MAR-1998 CLASSIFICATION: 80^n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 80, Application US/09047966;
Publication No. US20030138773A1
GENERAL INFORMATION:
TITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Modulating Gene Expression.
NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSE: John P. White, Esq.
STREET: 1185 Avenue of the Americas
CITY: New York
                                                                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGACCATGGGCAAGGGACCC 25
                                                                                                                                                                                                                                                                                                      24 GGCTCATGGCTATGGGTACC 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 75.0'
                                                                                                             TYPE: DNA
CORGANISM: Mus musculus
US-10-719-900-204642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Mus musculus
US-10-719-900-788103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-047-966-80
                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 33, Application US/10146835

Publication No. US20030073167A1

GENERAL INFORMATION:

APPLICANT: BOTOWSKY, Beth E.

APPLICANT: Gacalek, Kristine L.

APPLICANT: Lakhlani, Parul P.

APPLICANT: Lakhlani, Parul P.

APPLICANT: Lakhlani, Parul P.

TITLE OF INVENTION: DNA ENCODING SNORF36D RECEPTORS

FILE REFERENCE: 59138-A/JPW

CURRENT APPLICATION NUMBER: US/10/146,835

CURRENT FILING DATE: 2000-03-03

PRIOR APPLICATION NUMBER: US/09/518,914

PRIOR APPLICATION NUMBER: US/09/518,914

PRIOR APPLICATION NUMBER: US 09/303,593

PRIOR FILING DATE: 1999-06-03

NUMBER OF SEQ ID NOS: 44

SEQ ID NO 33

LENGTH: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence: Primer/Probe
                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                  Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 35;
                                                                                                                                                                                                                                                                                                                                                                             Query Match 68.0%; Score 13.6; DB 10; Best Local Similarity 75.0%; Pred. No. 4.5e+03; Matches 15; Conservative 1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.0%; Score 13.6; DB 14; 70.0%; Pred. No. 4.5e+03; tive 2; Mismatches 4;
                           28,678
ER: 26134-I22A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search completed: March 15, 2005, 21:09:24 Job time : 132.614 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15 GGGGAAGGCCTAAGGGAGCC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26 GGTCCATGGCTATGGGATCC 7
                                            REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-278-0400
TELEFAX: 212-391-0526
                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-09-047-966-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                        INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 35 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 70.01
Matches 14; Conservative
NAME: White, John P. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-10-146-835-33/c
```

THIS PAGE BLANK (USPTO)

```
March 15, 2005, 10:59:13 ; Search time 244.395 Seconds (without alignments) 900.574 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO6_NEW PUB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO6_NEW PUB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/USO8_NEW PUB.seq:*
7: /cgn2_6/ptodata/1/pubpna/USO8_NEW PUB.seq:*
8: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USO0_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11075104
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ggguccaccuccucgcggunnnnnugggcaugcgcc 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5537552 segs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                   OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-699-667E-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                             Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	Sequence 40, Appl	Sequence 80, Appl	Sequence 40, Appl	Sequence 80, Appl	Sequence 12, Appl	Sequence 13, Appl	Sequence 2, Appli	Sequence 7, Appli	Sequence 8, Appli	Sequence 6, Appli	Semience 4. Appli
	D	US-10-346-880-40	US-10-346-880-80	US-10-150-407-40	US-10-150-407-80	US-09-733-042-12	US-09-733-042-13	US-09-190-246-2	US-10-237-302-7	US-10-237-302-8	US-10-485-281-6	US-09-190-246-4
	DB	17	11	11	17	σ	σ	10	15	15	18	10
	Match Length DB	52	25	52	52	90	90	90	91	66	5451	8100
ָם מופיל מופיל	Match	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
	Score	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
111100	No.	-	7	٣	4	S	9	7	80	6 0	10	11
Ω	•											

4         82.2         15538         10         US-09-190-246           9         78.4         56         10         US-09-507-362           7         10         110         US-09-507-362           7         31         10         US-09-567-701           7         31         10         US-09-764-891           7         31         10         US-09-764-891           7         31         10         US-09-764-891           6         71.9         4741         10         US-09-764-891           6         70.3         1137         18         US-10-441-926         668           6         70.3         2226         11         US-09-968-007         668         669           70.3         1137         18         US-10-441-926         668         669<	Sequence 1, 7 Sequence 39,	Seguence 39,	Sequence 25,	29 Sequence 9829	2 Sequence 4	Seguence	Seguence	Sequence	Sequence	Sequence 111,	Sequence	Sequence	Sequence 8, Ag	Sequence 493,	Sequence 34, 1	Sequence 36,	Sequence 40,	Sequence 41,	Sequence 42,	Sequence 7203	Sequence 33,	Sequence 183,	Sequence 17,	Sequence 1,	Sequence 3622	9 Seguence	9 Sequence	Sequence 3	Sequence 391	S	e 118,	Samience 54 Anni
30.4 82.2 15538 1 2 2 2 3 3 1 3 1 3 2 2 4 3 4 4 5 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	US-09-190-246-1 US-09-507-362-3				US-09-867-701-430																									US-09-764-853-41		115-10-389-647-5
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	38 10 56 10	-	Н	Н	6 21																				٠.	٠.	٠.	_	٦	6 89	٦	71 98
0. 4999 9999 9999 9999 9999 9999 99999 99999		υ,		33	3	258	474	9	_	N	N		171											9					_			129
2000.000000000000000000000000000000000	82.2 78.4	78.4	73.0	71.9	71.9	71.9	71.9	70.3	70.3	70.3	70.3	69.7	69.7	69.2	69.2	69.2	69.2	69.2	69.2	69.3	69.2	69.2	69.2	69.2	9.89	68.6	68.6	68.6	68.6	9.89	9.89	9
1111	. 0	29	27	26.6	26.6	26.6	26.6	26	26	26	26	25.8	25.8	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
	12	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	5	30	31	32	33	34	32	36	37	38	39	40	41	42	43	44

#### ALIGNMENTS

```
WESOUR:

1. Sequence 40, Application US/10346880

1. Sequence 40, Application US/10346880

1. Sequence 40, Application US/10346880

1. Sequence 40, Application US/1036381

2. Sequence 40, Application West Constant Const
```

```
APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68
US-10-346-880-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó,
                                     PEATURE: OTHER INFORMATION: Artificial sequence: nested primer HDV17-68
                                                                           Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82.2%; Score 30.4; DB 17; Length 52; 59.4%; Pred. No. 2.7;
                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indele
                                                                           82.2%; Score 30.4; DB 17; 59.4%; Pred. No. 2.7;
                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                            1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-150-407-40
; Sequence 40, Application US/10150407
; Publication No. US20040029278A1
; GENERAL INFORMATION:
                                                                         Query Match 82.2%
Best Local Similarity 59.4%
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 59.4%
....hes 19; Conservative
                   TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Unknown
                                                        US-10-346-880-40
         LENGTH: 52
 SEQ ID NO 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
                                                                                                                 ð
                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUGRARYOFIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
                                              Driver, David A.

TITLE OF INVENTION: EKKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 82.2%; Score 30.4; DB 17; Length 52; Best Local Similarity 59.4%; Pred. No. 2.7; Matches 19; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: MCMadters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Jul-1999
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; SEQUENCE DESCRIPTION: SEQ ID NO: 40:
US-10-150-407-40
                                                                                                                                                                                               CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 80, Application US/10150407; Publication No. US20040029278A1; GENERAL INFORMATION:
Polo, John M.
Jolly, Douglas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPAX: (206) 682-603
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Seattle
STATE: Washington
COUNTRY: US
```

US 60/169,988

```
; TYPE: DNA
; ORGANISM: HDV-REV
US-09-733-042-13
                                                                                                                                                                                                                                                                                                                                                                                                               US-09-190-246-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-237-302-7
                                                                                                                                                                                                                                                                                          ଟ
                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12, Application US/09733042
Patent No. US20020168709A1
GENERAL INFORMATION:
APPLICANT: Hennecke, Frank
APPLICANT: Renner, Wolfgang A.
TITLE OF INVENTION: Replicon Based Activation of Endogenous Genes
FILE REFERENCE: 1700.0100001
CURRENT APPLICATION NUMBER: US/09/733,042
CURRENT FILING DATE: 2000-12-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Hennecke, Frank
APPLICANT: Renner, Wolfgang A.
TITLE OF INVENTION: Replicon Based Activation of Endogenous Genes
FILE REFERENCE: 1700.0100001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 90;
                                                                        PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: US/09/350,522

PILING DATE: 08-Jul-1999

ATTORNEY/AGENT INFORMATION:
NAME: MCMaeters, David D.
REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 33,963

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.2%; Score 30.4; DB 17; 59.4%; Pred. No. 2.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82.2%; Score 30.4; DB 9;
59.4%; Pred. No. 2.7;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22 TCCACCTCCTCGGGTCCGACCTGGGCATCCG 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12; Mismatches
                   APPLICATION NUMBER: US/10/150,407
                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MBER: US 60/169,988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/733,042 CURRENT FILING DATE: 2000-12-11
                                        FILING DATE: 17-May-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                           TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 13, Application US/09733042
Patent No. US200221068709A1
GENERAL INFORMATION:
APPLICANT: Hennecke, Frank
                                                                                                                                                                                                                                                              TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                              LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 59.49
Matches 19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
Best Local Similarity 59.44
Matches 19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: HDV-FOR
US-09-733-042-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-733-042-13/c
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 12
LENGTH: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Partington, Mark
APPLICANT: Partington, Mark
APPLICANT: Li, Xiaomao
APPLICANT: Nichel
APPLICANT: Nichel
CURRENT PILING NUMBER: US/09/190,246
CURRENT FILING DATE: 1998-11-13
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
LENGTH: 90
                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 90;
                                                                                                                                                                                                                                                               DB 9; Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence; NOTE
                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/10237302

Sequence 7, Application US/10237302

Publication No. US20030119182A1

GENERAL INPORMATION:

APPLICANT: AlphaVax, Inc.

APPLICANT: Jonathan F. Smith

APPLICANT: Jonathan O. Rayner

APPLICANT: Jonathan O. Rayner

APPLICANT: Ban J. Caley

TITLE OF INVENTION: ALPHAVIRUS REPLICON VECTOR SYSTEMS

TILE OF INVENTION: ALPHAVIRUS REPLICON VECTOR SYSTEMS

FILE REFERENCE: 01113.0002U2

CURRENT APPLICATION NUMBER: 05/317,722

PRIOR FILING DATE: 2001-09-06

PRIOR FILING DATE: 2001-09-06

NUMBER OF SEQ ID NOS: 49

SOFTWARE: PSELSEQ for Windows Version 4.0

SEQ ID NO 7

LENGTH: 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
82.2%; Score 30.4; DB 10;
Best Local Similarity 59.4%; Pred. No. 2.7;
Matches 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                22 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 53
                                                                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                            Query Match 82.2%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 2.7;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/09190246 Publication No. US20030180257A1 GENERAL INFORMATION:
PRIOR APPLICATION NUMBER: US 60
PRIOR FILING DATE: 1999-12-10
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patentin version 3.0
SEQ ID NO 13
LENGTH: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
; ORGANISM: Semliki Forest virus
US-09-190-246-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
```

```
Query Match
Best Local Similarity 59.49
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 8100
                                                                                                                                                                                                    US-09-190-246-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-190-246-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                     셤
                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6, Application US/10485281

Sequence 6, Application US/10485281

Publication No. UG20040265821A1

GENERAL INFORMATION:

APPLICANT: Sandig, Volker:

APPLICANT: Jordan, Ingo

TITLE OF INVENTION: RNA Amplification System Using Plant Components in TITLE OF INVENTION: Annal Cells

TITLE OF INVENTION: Annal Cells

TITLE OF INVENTION: Annal Cells

FILE REFERENCE: 04002648/JH

CURRENT PILING DATE: 20004-01-29

FRIOR PELING DATE: 20004-01-29

NUMBER OF SEQ ID NOS: 6

SOFTWARE: PATENTIN US: 2002-07-29

NUMBER OF SEQ ID NOS: 6

SEQ ID NO 6

LENGTH: 5451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Description of Artificial Sequence: Vector plJO-79
US-10-485-281-6
                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                Length 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence; NOTE OTHER INFORMATION: Synthetic Construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                APPLICANT: Alphavax, Inc.
APPLICANT: Alphavax, Inc.
APPLICANT: Jonathan F. Smith
APPLICANT: Gonathan C. Sanith
APPLICANT: Sergey A. Dryga
APPLICANT: Sergey A. Dryga
APPLICANT: Sergey A. Dryga
APPLICANT: Ian J. Caley
TITLE OF INVENTION: ALPHAVIRUS REPLICON VECTOR SYSTEMS
FILE REFERENCE: 01113.0002U2
CURRENT APPLICATION NUMBER: 05/217,302
CURRENT APPLICATION NUMBER: 60/317,722
PRIOR PILING DATE: 2001-09-06
NUMBER OF SEQ ID NOS: 49
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 99
                                                            ; Score 30.4; DB 15;
; Pred. No. 2.7;
12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18 TCCACCTCCTCGCGTCCGACCTGGGCATCCG 49
                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 30.4; D
Pred. No. 2.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
; OTHER INFORMATION: Synthetic Construct US-10-237-302-7
                                                                                                                                                                                                                                                                                Sequence 8, Application US/10237302
Publication No. US20030119182A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Artificial Sequence
                                                            / Match 82.2%;
Local Similarity 59.4%;
nes 19; Conservative 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 59.44
Matches 19; Conservative
                                                                                                                                                                                                                                                               US-10-237-302-8/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-237-302-8
                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                     Matches
                                                                                                                                                ò
                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                               Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09190246;
Sequence 1, Application No. US20030180257A1
GENERAL INFORMATION:
APPLICANT: Parrington, Mark
APPLICANT: Li, Xiamao
APPLICANT: Klein, Michel
TITLE OF INVENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES
FILE REFERENCE: Parrington et al.
CURRENT APPLICATION NUMBER: US/09/190,246
CURRENT FILING DATE: 1998-11-13
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 15538
                                                                                                                                                                                                                            Sequence 4, Application US/09190246
; Bedication No. US20030180257A1
; GENERAL INFORMATION:
; APPLICANT: Barrington, Mark
; APPLICANT: Li, Xiaomao
; APPLICANT: Li, Xiaomao
; APPLICANT: Li, Xiaomao
; APPLICANT: Li, Xiaomao
; TITLE OF INNENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES
; FILE REFERENCE: Parrington et al.
; CURRENT FILING DATE: 1998-11-13
; UNRENT FILING DATE: 1998-11-13
; NUMBER OF SEQ ID NOS: 7
; SEQ ID NO 4:
; DENORMARE: Patentin Ver. 2.0
; SEQ ID NO 4:
                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 15538;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
Length 5451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 8100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82.2%; Score 30.4; DB 10;
59.4%; Pred. No. 2.8;
iive 12; Mismatches 1;
82.2%; Score 30.4; DB 18;
59.4%; Pred. No. 2.8;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12479 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 12510
                                                                                                                 S002 TCCACCTCCTCGGGTCCGACCTGGGCATCCG 5033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.2%; Score 30.4; D 59.4%; Pred. No. 2.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 39, Application US/09507362
Publication No. US20030096397A1
GENERAL INCRMATION:
APPLICANT: Dubensky Jr., Thomas W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA; CRGANISM: Semliki Forest virus US-09-190-246-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Semliki Forest virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 59.4
Matches 19; Conservative
```

us-09-699-667e-63.std.rnpb

```
Search completed: March 15, 2005, 15:52:00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 58.69
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Job time : 250.395 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Januario No. Usacura
GENERAL INFORMATION:
Polo, John M.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
SYNTHESIS
                                                                                                       WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
ADDRESSE: Seed Intellectual Property Law Group PLLC
STREET: Old Fifth Avenue, Suite 6300
CITY: Seattle
STATE: Washington
COUNTRY: UsA
ZIP: 98104-7092
                                                                                                                                                                                   ADDRESSEE: Seed Intellectual Property Law Group PLLC STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10; Length 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REPERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMULCATION:
TELECHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION UMBER: US/09/507,362
FILING DATE: 18-PED-2000
CLASSIFICATION: <un
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78.4%; Score 29;
58.6%; Pred. No. 9
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT
                                                                                                                        SYNTHESIS
                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 39, Application US/10391441 Publication No. US20030232058A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                STATE: Washington
                                                                                                                                                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 58.69
Matches 17; Conservative
                                                                                                                                                                                                                                                                 COUNTRY: USA
ZIP: 98104-7092
                                                                                                                                               SEQUENCES:
                                                                                                                                               NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
```

ઠ

```
Sequence 25, Application US/10855975
Fublication No. US20050037487A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Hamm, Stefan
APPLICANT: Ebihara, Hideki
APPLICANT: Ebihara, Hideki
APPLICANT: Ebihara, Hideki
APPLICANT: Ebihara, Vaccines and Gene Therapy
TITLE OF INVENTION: Vaccines and Gene Therapy
FILE REFERENCE: 800.037US1
CURRENT APPLICATION NUMBER: US/10/855,975
CURRENT FILING DATE: 2004-05-27
PRIOR FILING DATE: 2003-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                   CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/391,441
FILING DATE: 17-Mar-2003
FILING DATE: 17-Mar-2003
CLASSIFCATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-Peb-2000
ATTORNEY/AGETY INFORMATION:
NAME: McMasters, David D.
REFERENCE/DOCKET NUMBER: 93,963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19; Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
SERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: A synthetic HDV ribozyme sequence US-10-855-975-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 73.0%; Score 27; DB Best Local Similarity 77.8%; Pred. No. 55; Matches 21; Conservative 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 37
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 25
LENGTH: 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78.4%; Score 29; 58.6%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67 UCCACCUCCUCGGGGUCCGACCUGGGC 93
                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO: 39: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: RNA ORGANISM: Artificial Sequence
```

THIS PAGE BLANK (USPTO)

CG351156 OG3AD51TV

CG351156

σ 951

```
71.4
26.4
25
                                                                                                                                                                                                                                                                                                                                          March 15, 2005, 10:06:47; Search time 1607.39 Seconds (without alignments) 876.189 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68479088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-699-667E-63
37
1 ggguccaccuccucgcggunnnnnugggcaugcgcc 37
                                                   GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34239544 segs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9b est1: * 9b est2: * 9b est4: * 9b est4: * 9b est6: * 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                               Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description		BG911802 602810016 AG412786 Mus muscu BI997265 1031048E1	மு	AV623815 AV623815 BE585168 6-11E-20	0.00		N m .	B1999774 1031078E0 CC337252 OGTAH36TV BG857676 1024053C1	BF303855 601886656 CG351145 OG3AD51TH	CC710615 OGLAM65TV BF673679 602136403 CC625292 OGUKO53TH	CG372347 OG3DH25TH
SUMMARIES DB ID		4 BG911802 9 AG412786 4 B1997265	1 AA421385 2 BE453046	1 AV623815 2 BE585168	7 CO897592 7 CF861288	2 BF431987 4 BI874134	2 BF860462 5 BQ360043	4 B1999774 8 CC337252 4 BG857676	2 BF303855 9 CG351145	9 CC710615 2 BF673679 9 CC625292	9 CG372347
Length	534 673	993 746 533	313	490 492	529 549	597	396 396	505 700 714	732 854	883 899 917	935
% Query Match	74.1	74.1	71.9	71.9	71.9	71.9	71.9	71.4	71.4	71.471.471.4	71.4
Score		27.4 27.2 26.8	26.6	26.6 26.6	26.6 26.6	26.6 26.6	26.6	26.4 26.4 4.4.4	26.4	26.4 26.4 26.4	26.4
Result No.	42	ΩΩ W 44 10	00	დ თ	т п		c 14	c 17	c 19	c 21 c 22 23	c 24

1 AL549479 AL549479	4 BG3333	2 BEZI3694 BEZI3694 4 BI994938 BI994938	2 BE724383 BE724383	1 A1089049 A1089049 6 CD580216 CD580216	9 CNSO260Y AL182779	7 CO057014 CO057014	7 CF272838 CF272838	4 BI580076 BI580076	9 CC731992 CC731992	9 CG383035 CG383035 8 CC345816 CC345816	4 BG962356 BG962356	9 CNSO6SUR AL413737	5 BM923378 BM923378 5 BQ460415 BQ460415	ALIGNMENTS		534 bp DNA linear GSS 31-OCT-2002 reromyces delphensis Random Genomic Library	genomic clone KD1848	, , , , , , , , , , , , , , , , , , ,	***************************************	lelphensis lelphensis	<ul> <li>j. Ascomycota; Saccharomycotina; Saccharomycetes;</li> <li>es; Saccharomycetaceae; Kluyveromyces.</li> </ul>	534)	Wong, b., rates, m.A., gimmermann, w., butler, b. and wolle, b.n. Evidence from comparative geomeics for a complete sexual cycle in	(2), R10 (2003)			energes, smarre inscrees.	319	die	ends.	44.4	ism="Kluyveromyces delphensis"	ype="genomic DNA" n="CBS 2170"	/db xref="taxon:51657"	:="KD1848" : lib="Kluvveromvces delphensis Random Genomic	Y		4.1%; Score 27.4; DB 8; Length 534; 4.1%; Pred. No. 9.8e+02; ve 11; Mismatches 6; Indels 0; Gaps 0;	ICGCGGUNNNNUGGGCAUGCGCC 37	
71.4	71.4	70.8	70.8	2 70.8	2 70.8	70.3	70.3	70.3	6 70.3	70.3	70.3	5 70.3	26 70.3 1097 5.8 69.7 168			BZ302458 KD1848.pl Kluyveromyces d	Kluyveromyces de seguence.		GSS.	Kluyveromyces de Kluyveromyces de	Eukaryota; Fung Saccharomycetal	1 (bases 1 to	Wong, S., Fares, E Evidence from Co	Genome Biol. 4	22508158 12620120	Contact: Wong S	Trinity College	Tel: 353 1 6082:	Email: swong@tcc	Class: plasmid	153	/organ:	/moi_t) /straii	/db xre	/clone:	Librar		ch 74.1%;   Similarity 54.1%; 20; Conservative 1	1 GGGUCCACCUCCU	
2 7 2	c 27 26.	8 6	30		33	35	36		39	40	4 4		44 c 45 25		RESULT 1	LOCUS		ACCESSION	KEYWORDS	SOURCE		REFERENCE	TITLE	JOURNAL	MEDLINE	COMMENT				900	r,					MIGIAC	ORIGIN	Query Match Best Local Matches 2	8	7

REFERENCE AUTHORS

FEATURES

RESULT 3

셤

ORIGIN

ACCESSION

VERSION KEYWORDS SOURCE

RESULT 2 BU363843

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E. (Dasses 1 to 993)

S. NIH-MGC http://mgc.nci.nih.gov/.

L. Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: MGC.E. Consortium/LLNL at:

Localian/LNL at:

High quality sequence etop: 606.

High quality sequence etop: 606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disable 1 to 746)
Hattori,M., Toyoda,A., Noguchi,H., Kojima,T. and Sakaki,Y.
Hattori,M., Toyoda,A., Noguchi,H., Kojima,T. and Sakaki,Y.

Direct Submission
Submitted (17-NOV-2003) Masahira Hattori, The Institute of Physical
and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
1-7-22 Suchiro-chou,Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
(E-mail:hattori@gsc.riken.jp, UR:http://hgp.gsc.riken.go.jp/,
Tel:81-45-503-9111, Fax:81-15-503-9170)
Clones are derived from the mouse BAC library MSMg01. For BAC
library availability, please contact Kuniya Abe (abe@rtc.riken.jp).
Tsukuba Institude, Bio Resource Center,
The Institute of Physical and Chemical Research (RIKEN) 3-1-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AG412786 746 bp DNA linear GSS 03-JUN-2004
Mus musculus molossinus DNA, clone:MSMg01-273013.T7, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B (T1 phage-resistant)"
/clone_lib="NCI CGAP Brn67"
/note="Grgan: Drain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT. Average insert size 2.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tisgue_type="anaplastic oligodendroglioma with 1p/19q"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hattori,M., Toyoda,A., Noguchi,H., Kojima,T. and Sakaki,Y.
BAC end Sequences of Library MSMg01
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 74.1%; Score 27.4; DB 4; Length 993; Best Local Similarity 56.8%; Pred. No. 1e+03; Matches 21; Conservative 10; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 636 GGCTGCACCGCCTGGCAGTCGTACGTGGGCAGGCGCC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4942299"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus molossinus
Mus musculus molossinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AG412786.1 GI:48055472
                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ведиенсе.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AG412786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
AG412786/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="cerebrum"
/dev stage="adult"
/dev stage="adult"
/dob_host="bult 100"
/dobhost="bult 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   993 bp mRNA linear EST 05-JUN-2001
602810016F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4942299
5', mRNA sequence.
BG911802
BG911802.1 GI:14292278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                        BU363843 673 bp mRNA linear EST 28-NOV-2002
603587131F1 CSEQCHN72 Gallus gallus cDNA clone ChEST545m7 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bosch, E.,
                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianidae; I (allus; I (bases 1 to 673) Boardman, P. E., Sanz-Ezquerro, J., Overton, I. M., Burt, D. W., Bosch, E. Poogy, W. T., Tickle, C., Brown, W.R.A., Wilson, S.A. and Hubbard, S.J. Comprehensive Collection of Chicken cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Department of Biomolecular Sciences
University of Manchester Institute of Science and Technology
(UMIST)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       447 GGGTTCCCCTCCTCACTGTTGATGTTGGACATGCACC 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74.1%; Score 27.4; DB 5;
51.4%; Pred. No. 9.9e+02;
iive 12; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/strain="Compton Line 151"
/db_xref="taxon:9031"
/clone="ChEST545m7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PO Box 88, Manchester, M60 1QD, UK Tel: 01612008930 Fax: 01612360409 Email: Simon. Hubbard@umist.ac.uk. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Gallus gallus"
                                                                                                                                                                                                                                                   BU363843.1 GI:25871844
                                                                                                                                                                                                                                                                                                                    Gallus gallus (chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Simon Hubbard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 51.1.,
Local 19; Conservative 7
                                                                                                                                                                                                                                                                                                                                                        Gallus gallus
                                                                                                                                                                                   seguence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12445392
                                                                                                                                                                                                                BU363843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22335534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG911802/c
                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
MEDLINE
PUBMED
```

ö

Gapa

```
synthesized. The cDNA was directionally cloned into lambda Zap II (Stratagene) in the EcoRI (5') and XhoRI (3') sites. pBluescript II SK- plasmids were excised from the lambda ZAP clones by superinfection with ExAssist (Stratagene) phage. The library was normalized using method 4 described in Bonaldo et al., (1996) Genome Research 6: 791-806."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 09-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
I (bases 1 to 313)
Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylle,T., Waterston,R. and Wilson,R. WashU-NCI human EST Project
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 967 Std Error: 0.00 Seg primer: -28ml3 rev2 ET from Amersham.
                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313 bp mRNA linear EST 09-N
Zu27f02.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone
IMAGE:739227 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                Query Match 72.4%; Score 26.8; DB 4; Length 533; Best Local Similarity 56.7%; Pred. No. 1.6e+03; Matches 17; Conservative 11; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
71.9%; Score 26.6; DB 1; Length 313;
Best Local Similarity 54.5%; Pred. No. 1.9e+03;
Matches 18; Conservative 11; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                              503 GGTCCACCTCGCGGTTCTTCTAGCA 532
                                                                                                                                                                                                                                                                                                                                                2 GGUCCACCUCCUCGCGGUNNNNNUGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
|db_xref="GDB:5938712"
|db_xref="taxon:9606"
|clone="IMAGE:739227"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA421385
AA421385.1 GI:2100271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
AA421385/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Chlamydomonas reinhardtii"
/mol_type="mRNA"
/errann="Cc_1690 wild type mt+ 21gr"
/db xref="taxon:3055"
/clone_lib="C. reinhardtii CC-1690, Stress II
/normalized, Lambda Zap II SK.; Site_1: EcoRI; Site_2:
XhoI; Stress condition II library, constructed by John
Davies and Jeffrey McDermott, combines cDNAs from CC-1690
cells grown to mid-log phase in TAP (NH4+ - containing)
and shifted to TAP - NO3- (24hrs); H2 production
conditions (0, 12hr, 24hr) see Melis et al., (2000) Plant
Phys: 122: 127-135; TAP + H2O2 (1, 12, 24 hr); TAP +
sorbitol (1, 2, 6, 24 hr); TAP + Cd (1, 2, 6, 24 hr).
PolyA mRNA was purified from each sample, pooled and cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B1997265 533 bp mRNA linear EST 25-OCT-2001 1031048E12.x2 C. reinhardtii CC-1690, Stress II (normalized), Lambda Zap II Chlamydomonas reinhardtii cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chlamydomonas reinhardtii
Chlamydomonas rainhardtii
Bukaryota; Viridiplantes; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Grossman, A., Chang, C.-W., Davies, J., Harris, E., Hauser, C.,
Lefebvre, P., McDermott, J.P., Shrager, J., Silfilow, C. and Stern, D.
Analyses of the Chlamydomonas reinhardtii Genome: A Model,
Unicellular System for Analyzing Gene Function and Regulation in
Unpublished (2001)
Contact: Charles Hauser
DCMB Box 91000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 73.5%; Score 27.2; DB 9; Length 746; Best Local Similarity 56.2%; Pred. No. 1.2e+03; Matches 18; Conservative 11; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue type="mixture of kidney and spleen"
/clone_lib="MSMg01 Mouse Male BAC Library"
                                                                                                                                                                                                                                                                                               /organism="Mus musculus molossinus"
/mol type="qenomic DNA"
/sub_species="molossinus"
/db_xref="taxon:57486"
/clone="mosMg01-273013.T7"
koyadai, Tsukuba, 305-0074 Japan
phone: 81-298-36-9189, fax: 81-298-36-9199
e-mail: abe@rtc.riken.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              742 CCACCTGCTGCTGTTGTGGGTGGGGATGCGC 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 CCACCUCCUCGCGGUNNNNNNGGGCAUGCGC 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Duke University
Durham, NC 27708-1000
Tel: 919 613 8159
Fax: 919 613 8177
Email: chauser@duke.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BI997265.1 GI:16432039
                                                                                                                                                                           : pBACe3.6
: EcoRI
: ECORI.
                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 533)
                                                                                                                                  Sequencing : T7
LIBRARY
                                                                                                                                                                                Vector
R.Site 1
R.Site 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B1997265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI997265
                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
```

셤

BE453046/c LOCUS

g

ACCESSION

VERSION KEYWORDS

ORGANISM

AUTHORS

TITLE

REFERENCE

JOURNAL

COMMENT

FEATURES

```
Contact: Erika Asamizu
The First Laboratory for Plant Gene Research
Kazusa DNA Research Institute
Yana 1532-3, Kisarazu, Chiba 292-0812, Japan
Email: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BES85168 492 bp mRNA linear EST 16-AUG-2000
6-11E-ZO PsojaeZO Phytophthora sojae cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol trype="mrm."
/lab_host="B. coli strain XLOLR"
/lab_host="B. coli strain XLOLR"
/lab_host="Wetor: PBK-CWY, site 1: EcoRI; Site 2: XhoI; This cDNA library was constructed from polyA+ enriched mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phytophthora.

1 (bases 1 to 492)

Qutob,D., Hraber,P.T., Sobral,B.W.S. and Gijzen,M.

Comparative analysis of expressed sequences in Phytophthora sojae plant Physiol. 123 (1), 243-254 (2000)
                                                                         1 (bases 1 to 490)
Asamizu, E., Miura, K., Kucho, K., Inoue, Y., Fukuzawa, H., Ohyama, K.,
Nakamura, Y. and Tabata, S.
Generation of expressed sequence tags from low-CO2 and high-CO2
adapted cells of Chlamydomonas reinhardtii
DNA Res. 7 (5), 305-307 (2000)
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Gijzen M
Agriculture and Agri-Food Canada
1391 Sandford Street, London, Ontario, Canada NSV 4T3
Tel: 519 457 1470
Fax: 519 457 3997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71.9%; Score 26.6; DB 1; Length 490; 51.5%; Pred. No. 1.9e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Phytophthora sojae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82 GGGTCCAGCTTCTCGGGGTGATTCGTGGTCATG 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gijzenm@agr.gc.ca.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BE585168.1 GI:9836117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Phytophthora sojae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Phytophthora sojae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
hes 17; Conserv
                                                                                                                                                                                                                                                                                                                                              11089912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20267956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10806241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE585168/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                    MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anote="Vector: pBluescript II SK-; Site I: EcoRI; Site 2:
XhoI; This library, constructed by John Davies and Jeffrey
McDermott, combines cDNAs from CC-1690 cells grown to
mid-log phase in TAP (actate-containing) medium in the
light, TAP medium in the dark, HS (minimal) medium in the
light, TAP medium in the dark, HS (minimal) medium in ambient levels of CO2 and HS medium bubbled with 5% CO2.
POlYA mRNA was purified from each sample, pooled and CDNA
synthesized. The CDNA was directionally cloned into lambda
ZAP II (Stratagene) in the EcoRI (5') and XhoI (3') sites.
pBluescript II SK- plasmids were excised from the lambda
ZAP clones by superinfection with ExAssist (Stratagene)
phage. The library was normalized using method 4 described
in Bonaldo et al (1996) Genome Research 6: 791-806."
                                                                                                                                                                                                                                                                 BE453046

341 bp mRNA linear EST 26-JUL-2000
894067H12.yl C. reinhardtii CC-1690, normalized, Lambda Zap II
Chlamydomonas reinhardtii cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA" | for the minimal of the content o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 15-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chlamydomonas reinhardtii
Eukaryota, Viridiplantae, Chlorophyta, Chlorophyceae, Volvocales,
Chlamydomonadaceae, Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grossman, A., Davies, J., Federspiel, N., Harris, E., Lefebvre, P., McDermott, J. P., Silflow, C., Stern, D. and Surzycki, R. Analyses of the Chlamydomonas reinhardtii Genome: A Model, Unicellular System for Analyzing Gene Function and Regulation in Vascular Plants; project phase 2 Unpublished (2000) Contact: Elizabeth H. Harris DCMB Dox 91000 Duke University

Durham, NC 27708-1000, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AV623815 Chlamydomonas reinhardtii 5% to 0.04% CO2 Chlamydomonas reinhardtii 5% to 0.04% CO2 Chlamydomonas reinhardtii cDNA clone LC069a08_r 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Chlamydomonas reinhardtii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71.9%; Score 26.6; DB 2; 54.5%; Pred. No. 1.9e+03; tive 11; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299 TCCACCTCCGCGGGTACCTCTTGATCATGCCC 267
                                                 290 GGGTCCACCTGCTTGCCGTGCTCTGTGGGCAGG 258
               GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCGC 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chlamydomonas reinhardtii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chlamydomonas reinhardtii
Chlamydomonas reinhardtii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AV623815.1 GI:10772992
                                                                                                                                                                                                                                                                                                                                                                                                                       BE453046.1 GI:9460065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: chlamy@duke.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 341)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: 919 613 8164
Fax: 919 613 8177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AV623815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
```

RESULT 8 AV623815/c LOCUS DEFINITION

g

ACCESSION

Matches

ORIGIN

ö

Gaps

Gaps

```
containing SL1 on the 5' end and oligo(dT) on the 3' end were non-directionally cloned into pCRII-TOPO(Invitrogen) following the Topo TA cloning protocol. Radopholus similis total RNA was provided by Dr. Godelieve Gheysen of Ghent University (lighe@gengenp.rug.ac.be)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CF861288 549 bp mRNA linear EST 31-OCT-2003 psZO006iEllr Agriculture Canada Phytophthora sojae EST project_8ZO Phytophthora sojae cDNA clone sZO006Ell 5, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BF431987 597 bp mRNA linear EST 30-MAR-2001 nab83h11.x1 Soaree_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 549)
Qutch,D., Hraber,P.T., Sobral,B.W.S. and Gijzen,M.
Comparative analysis of expressed sequences in Phytophthora sojae
Plant Physiol. 123 (1), 243-254 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="Free swimming"
/clone_lib="Agriculture Canada Phytophthora sojae EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note="Vector: pBK-CMV; Site_1: EcoR1; Site_2: Xho1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Phytophthora sojae
Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
Phytophthora.
                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                           Length 529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71.9%; Score 26.6; DB 7; Length 549; 54.5%; Pred. No. 1.9e+03; ive 11; Mismatches 4; Indels
                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1880 Pratt Dr., Blacksburg, VA 24061, USA
Tel: 540-231-7318
                                                                                                                                                                                        Match 71.9%; Score 26.6; DB 7; Local Similarity 51.5%; Pred. No. 1.9e+03; es 17; Conservative 12; Mismatches 4
                                                                                                                                                                                                                                                                                                                           321 TCCACCTTCTCGCGGTACTCCTTGGCCATCTGC 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Phytophthora sojae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GUCCACCUCGCGGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Zoospores"
/cell_line="P6497"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: 006 row: E column: 11
Seg primer: BK reverse primer
High quality sequence stop: 549.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:67593"
/clone="sZ0006E11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BACKWARD: BK reverse primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCR PRimers
FORWARD: BK reverse primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CF861288.1 GI:38115914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: bmtyler@vt.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 71.9% Best Local Similarity 54.5% Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Phytophthora sojae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Tyler B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tyler lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10806241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20267956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST.
                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CF861288/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
PUBMED
                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
BF431987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
from zoospores grown in liquid medium. Zoospores were released into water and collected by centrifugation at 2,000g; zoospore-bearing sporangia were induced to develop on 5 to 7 d old mycelium colonies grown on v8 agar by repeated flooding with water. Complementary DNA was synthesized from mRNA using an Xhol-poly(dT) linker-primer. EcoRI adapters were ligated to the bluut-ended cDNA fragments and the products were digested with Xhol for directional cloning into lambda ZAP Express vector. This lambda library was amplified once using E coli host strain XLI Blue MRP'. Inserts were then subcloned by mass excision using ExAssist helper phage for conversion into phagemid vector PBK-CMV in E. coli host strain XLOLR. Sequenced using T3 primer: 5' ATT AAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_stage="Mixed"
/lab_host="GC10"
/clone_lib="Radopholus similis SL1 TOPO v1"
/note="Vector: pCR1: TOPO (Invitrogen); Site_1: 5': EcoR1; Site_2: 3': EcoR1; The library was constructed by Irina Site_2: 3': Example Mirreva (mmitreva@watson.wustl.edu) at Washington University, St. Louis. Oligo(GT)-SL1 PCR based library. Radopholus similis cDNA PCR products of size >400 nucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 13-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Nematoda, Chromadorea, Tylenchida, Tylenchina,
Tylenchoidea, Pratylenchidae, Radopholinae, Radopholus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CO897592 529 bp. mRNA linear EST 13-AUG-200 pe03f12.yl Radopholus similis SL1 TOPO v1 Radopholus similis CDNA 5. similar to SW:1434_CAEEL Q20655 14-3-3-LIKE PROTEIN 2. [1] ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l (bases 1 to 529)

Worderter, J., Cliffen, S., Chiapelli, B., Pape, D., Martin, J.,
Wylie, T., Dante, M., Marra, M., Hillier, L., Kucaba, T., Theising, B.,
Bowers, X., Gibbons, M., Ritter, E., Bennett, J., Franklin, C.,
Tragazatishvili, R., Ronko, I., Kennedy, S., Maguire, L., Beck, C.,
Underwood, K., Steptoe, M., Allen, M., Person, B., Svaller, T.,
Harvey, N., Schurk, R., Kohn, S., Shin, T., Jackson, Y., Cardenas, M.,
The Washington Univ. Nematode EST Project, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Mitreva M
The Washington Univ. Nematode EST Project, 2004
Washington University School of Medicine
Mashington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
Library constructed by: Irina Ronko and Dr. Makedonka Mitreva
Seq primer: SI primer
High quality sequence stop: 458.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                        71.9%; Score 26.6; DB 2; Length 492; 54.5%; Pred. No. 1.9e+03; ive 11; Mismatches 4; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Radopholus similis"
/mol_type="mRNA"
/db_xref="taxon:46012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GUCCACCUCCCCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                              host strain XLOLR. Seq
CCT CAC TAA AGG GA 3'."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CO897592.1 GI:51237382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 54.5%
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Radopholus similis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Radopholus similis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
CO897592
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CO897592/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
```

ઠે 셤 ö

Gaps

```
seguence.
                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
BF860462/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .597
/organism="MRomo sapiens"
/mol_type="mRNa"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/dlone="MRAGE:2274605"
/lab_host="DH10B"
/clone="MRAGE:2274605"
/lab_host="DH10B"
/clone="MRAGE:2574605"
/lab_host="DH10B"
/clone="MRAGE:2574605"
/lab_host="DH10B"
/clone="MRAGE:2574605"
/lab_host="DH10B"
/clone="MRAGE:2574605"
/clone="MRAGE:2574605"
/clone="MRAGE:2574605"
/clone="MRAGE:2574605"
/clone="MRAGE:2574605"
/clone="MRAGE:25400"
/clone="MRAGE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 11-OCT-2001
                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

    (bases 1 to 597)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chlamydomonas reinhardtii
Chlamydomonas reinhardtii
Eukaryota, Viridiplantae, Chlorophyta, Chlorophyceae, Volvocales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Grossman, A., Chang, C.-W., Davies, J., Harris, E., Hauser, C., Lefebyre, P., McDermott, J.P., Shrager, J., Sliflow, C. and Stern, D. Analyses of the Chlamydomonas reinhardtii Genome: A Model, Unicellular System for Analyzing Gene Function and Regulation in
                                                                                                                                                                                                                                                                                                                                NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                Nationary Learners
Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: Gapbs-rémail.nih.gov
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -400P from Gibco
High quality sequence stop: 488.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BI874134 linear EST 11-OCT-963113F07.yl C. reinhardtii CC-1690, Stress condition I, normalized, Lambda Zap II Chlamydomonas reinhardtii cDNA, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
IMAGE:3274605 3' similar to contains PTR5.b2 PTR5 repetitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
71.9%; Score 26.6; DB 2;
Best Local Similarity 54.5%; Pred. No. 1.9e+03;
Matches 18; Conservative 11; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              562 GGGTCCACCTGCTTGCCGTGCTCTGTGGGCAGG 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chlamydomonadaceae; Chlamydomonas.
1 (bases 1 to 617)
                           element;, mRNA sequence.
BF431987
                                                                                                  BF431987.1 GI:11444101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BI874134.1 GI:16072138
                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seguence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI874134/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
BF860462 19-JAN-2001 963016F09.y2 C. reinhardtii CC-1690, Stress condition I, normalized, Lambda Zap II Chlamydomonas reinhardtii CDNA, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chlamydomonas reinhardtii
Chlamydomonas reinhardtii
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Grossman, A., Davies, J., Federspiel, N., Harris, E., Hauser, C., Grossman, A., Davies, J., Federspiel, N., Silflow, C. and Stern, D. Lefebvre, P., McDermott, J.P., Shrager, J., Silflow, C. and Stern, D. Analyses of the Chlawdomonas reinhardtii Genome: A Model, Unicellular System for Analyzing Gene Function and Regulation in Unpublished (2000)

Contact: Charles Hauser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71.9%; Score 26.6; DB 4; Length 617; 51.5%; Pred. No. 1.9e+03; tive 12; Mismatches 4; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: chauser@duke.edu.
Location/Qualifiers
1. 754
/organism="Chlamydomonas reinhardtii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/strain="CC-1690 wild type mt+ 21gr"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           526 GGGTCCAGCTTCTCGGGGTGATTCGTGGTCATG 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUG 33
Vascular Plants. Project: 963
                                                                                                                                                               Location/Qualifiers
             Unpublished (2001)
Contact: Charles Hauser
DCMB Box 91000
Duke University
Durham, NC 27708-1000
Fax: 919 613 8159
Fax: 919 613 8177
Email: chauser@duke.edu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BF860462
BF860462.1 GI:12250599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Duke University
Durham, NC 27708-1000
Tel: 919 613 8159
Fax: 919 613 8177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17, Conservative
                                                                                                                                                                                    1. .617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DCMB Box 91000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
```

us-09-699-667e-63.std.rst

```
/db xref="taxon:3055"
/clone lib="C. reinhardtii CC-1690, Stress condition I,
normalized, Lambda Zap II"
/note="Vector: pBluescript II SK-; Site I: ECORI; Site 2:
XhOI; This library, constructed by John Davies and Jeffrey
MCDermott, combines CDNAs from CC-1690 cells grown to
mid-log phase in TAP-N (30 min, lhr, 4hr), TAP-S (30 min,
lhr, 4hr), TAP-P (4hr, 12hr, 24hr), NO3 to NH4 (30min,
lhr, 4hr) and NH4 to NO3 (30min, lhr, 4hr). PolyA mRNA was
purified from each sample, pooled and CDNA synthesized.
The CDNA was directionally cloned into lambda Zap II
(Stratagene) in the EcoRI (5') and XhORI (3') sites.
pBluescript II SK- plasmids were excised from the lambda
ZAP clones by superinfection with ExAssist (Stratagene)
phage. The library was normalized using method 4 described
in Bonaldo et al (1996) Genome Research 6: 791-806."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 396)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Eriones,M.R., Magai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstain,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and Simpson,A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ360043 396 bp mRNA linear EST 20-MAY-2002
PM1-HN0079-100101-005-d10 HN0079 Homo sapiens cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: +55-11-2707001

Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=PM1&t2=PM1-HN0079-
100101-005-dl0&t3=2001-01-10&t4=1)
Seq primer: puc 18 forward
High quality sequence start: 28
High quality sequence stop: 55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shorgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence tags
Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match 71.9%; Score 26.6; DB 2; Length 754; Best Local Similarity 51.5%; Pred. No. 2e+03; Matches 17; Conservative 12; Mismatches 4; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            296 GGGTCCAGCTTCTCGGGGTGATTCGTGGTCATG 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ360043
BQ360043.1 GI:21028363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
BQ360043/C
LOCUS
BQ360043/C
LOCUS
BCS10N
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
```

```
Site 2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
```

DRIGIN

Gaps .. 0 Length 396; Indels Query Match 71.4%; Score 26.4; DB 5; Best Local Similarity 55.6%; Pred. No. 2.2e+03; Matches 20; Conservative 10; Mismatches 6;

ö

142 GGTCCACCTCCTCGATGACGGCTCGGGCTTGCGGC 107 2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37 ઠે g

Search completed: March 15, 2005, 15:20:27 Job time : 1615.39 secs

ઠે 셤 WASH WALLE BLANK WERTON

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

	Search time 316.25 Seconds (without alignments) 1066.957 Million cell updates/sec
OM nucleic - nucleic search, using sw model	March 15, 2005, 11:20:37; Search time 316.25 Seconds (Without alignments) 1066.957 Million cell updat
OM nucleic -	Run on:

	TODO:33/ WITITOII CETT MENACES
Title: Perfect score:	US-09-699-667E-61 57
Sequence:	1 ggguccaccuccucgcggunuucgcauggcuaagggaccc 57

Sequence:

1 ggguccaccuccucgcggun.....uucgcauggcuaagggaccc

IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Scoring table:

4316768 Total number of hits satisfying chosen parameters: 4390206 segs, 2959870667 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 60

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

geneseqn2001bs: \*
geneseqn2002bs: \*
geneseqn2002bs: \*
geneseqn2003bs: \*
geneseqn2003cs: \*
; geneseqn2003cs: \* N Geneseq 16Dec04:\*

1: geneseqn1980s:\*

2: geneseqn2000s:\*

3: geneseqn2000s:\*

4: geneseqn2001as:\* geneseqn2004as:\* geneseqn2004bs:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Aaz57636 Trans-act	Aaz57637 Trans-act	Aaz57638 Trans-act	Aaz57639 Nucleotid	Adr47040 Dengue vi	Adt48965 PCR prime	Aag86173 Primer HD	Aag86204 Sindbis/H	Aat31151 HDV rever	Aat30817 HDV riboz	Aav42394 Nested PC	Aav42426 Forward P	Aav60154 Nested PC	Aav60185 Reverse P	Aav70746 Reverse P	Aav70714 Nested pr	Aaz92930 Hepatitis	Aaz92970 Hepatitis	Aaz92843 Hepatitis	Aaz92803 Hepatitis
SUMMARIES	ΙD	AAZ57636	AAZ57637	AAZ57638	AAZ57639	ADR47040	ADT48965	AAQ86173	AAQ86204	AAT31151	AAT30817	AAV42394	AAV42426	AAV60154	AAV60185	AAV70746	AAV70714	AAZ92930	AAZ92970	AAZ92843	AAZ92803
	DB	m	m	ო	ო	13	13	~	~	7	~	~	~	~	~	7	N	m	ო	ო	М
	* Query Match Length DB	57	57	57	37	48	48	51	52	52	52	52	52	52	52	52	52	52	52	52	22
	Query Match	100.0	100.0	83.2	62.1	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
	Score	57	57	47.4	35.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
	Regult No.	п	7	m	4	S	9	7	80	Đ	10	11	12	13	14	15	16	17	18	19	20

21 30.4 53.3 52 6 AAL38850 22 30.4 53.3 52 6 AAL38850 24 30.4 53.3 52 6 AAL38810 25 30.4 53.3 52 6 ABK46216 25 30.4 53.3 52 12 ADI30333 27 30.4 53.3 52 12 ADI30333 28 30.4 53.3 52 12 ADI30342 29 30.4 53.3 52 12 ADI3942 30 29 50.9 56 2 AAK59264 31 29 50.9 56 2 AAK59264 32 29 50.9 56 9 ADA50686 34 49.1 45 42.8 51 4 AAL27772 39 24 42.1 60 6 ABM47377 41 24 42.1 60 6 ABM47377 42 23.4 41.1 57 12 ADP69915 43 23.2 40.7 60 10 ADH1121	Aal38850 Alphaviru	Aal38810 Alphaviru	Abk46276 HDV antig	Abk46316 Hepatitis	Adi30383 Hepatitis	Adi30423 Hepatitis	Adol3982 Eukaryoti	Adol3942 Eukaryoti	Adh10551 Hepatitis	Aax59264 Nested pr	Aax58506 Nested pr	Abx81463 Sindbis v	Ada50686 Sindbis v			Abn40291 Human spl	Aal27772 Human SNP	Aba99916 Chicken t	Aaq46668 Substrate	Abn47377 Human spl	Abn37881 Human spl	Aal29909 Human SNP	Adp69915 LacZnls12	Aaz68737 Human map	Adhili21 E.coli mR
21 20 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	AAL38850	AAL38810	ABK46276	ABK46316	ADI30383	ADI30423	ADO13982	AD013942	ADH10551	AAX59264	AAX58506	ABX81463	ADA50686	AAX78132	ABN33323	ABN40291	AAL27772	ABA99916	AAQ46668	ABN47377	ABN37881	AAL29909	ADP69915	AAZ68737	ADH11121
21 20 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9	9	9	9	12	12	12	12	12	7	7	8	6	7	9	9	4	9	0	9	ø	4	12	m	2
22 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3	52	25	25	22	52	22	52	52	57	26	26	26	26	45	9	9	51	47	52	9	9	50	57	47	9
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	50.9	50.9	50.9	50.9	49.1	45.3	44.9	42.8	42.1	42.1	42.1	42.1	41.1	41.1	40.7	40.7
	30.4	30:4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	29	29	29	29	28	25.8	25.6	24.4	24	24	24	24	23.4	23.4	23.2	23.2
000 000	21	22	23	24	25	56	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
															υ	υ	υ				υ		υ	υ	

## ALIGNMENTS

Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence. /\*tag= b 20..25 /\*tag= c /bound\_moiety= "SP1.1 substrate (AAZ57641) bases 5-11" 30..45 /\*tag= d 52..57 /\*tag= e /\*tag= e /\*tag= e 1. .6 /\*tag= a /\*tag= adouble stranded region with bases 52-57" 7. .19 Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.1; ss. Location/Qualifiers BP. 99WO-CA000391. AAZ57636 standard; RNA; 57 (first entry) Key misc\_binding 29-APR-1999; misc\_binding WO9955856-A2 05-APR-2000 misc\_binding 04-NOV-1999. Synthetic. stem\_loop stem\_loop AAZ57636; RESULT 1 AAZ57636 BXIXBXBXBXBXBXIIIIIIIIIIIII

Perreault J, Ananvoranich S, Lafontaine D; (UYSH ) UNIV SHERBROOKE.

98CA-02230203.

29-APR-1998;

WPI; 2000-096791/08.

```
ö
                                                                               This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNXXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *1. At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate sequence. The enzyme of the invention is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20. .25
/*tag= c
/bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUGGGGGUCCGACCUGGGCAUGGGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                         Gaps
             New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trans-acting antigenomic delta ribozyme; viral RNA cleavage;
inherited disease; deltaRzF1.2; ss.
                                                                                                                                                                                                                                                                                                                          Score 57; DB 3; Length 57;
Pred. No. 3e-07;
                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                               Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lafontaine D;
                                                                                                                                                                                                                                                                                                                                        Pred. No. 3e-0
6; Mismatches
                          diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                          Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57637 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                            100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-CA000391
                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 89.5%;
Matches 51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= (
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .6
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
7. .19
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57637;
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                             임
```

```
This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme cleaves substrate SP1.2 (see AAZ57634). The invention relates to a nucleic acid maryme (e.g. deltaRzP1.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion with the following sequence 3'-UNNXNN-5'. The cleavage site of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate cleavage site of nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate of the enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and disgnostic applications. Note: This sequence is not shown in the specification, but has been derived from the cleavage strate in the specification, but has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= b
20. 25
//tag= c
/bound_moiety= "SP1.1 substrate bases (AAZ57641) 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *tag= a
note= "Forms double stranded region with bases 52-57"
...19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGUCCACCUCCUCGCGGUCCCAGCUGGGCAUGCGGCUUCGCAUGGCUAAGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Gaps
                                   construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 57; DB 3; Length 57; 89.5%; Pred. No. 3e-07; tive 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                        Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                  diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                    Example 1; Page; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ57638 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .6
/*tag=
note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. .
/*tag=
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

us-09-699-667e-61.siz.rng

```
Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADR47040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                     ଟ
                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                       This is the nucleotide sequence of a trans-acting antigenomic delta Thiozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AA257641). The invention relates to a nucleic acid enzyme (e.g. deltaR2P1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNWINN-3'. The binding portion of the enzyme (ribozyme) hase pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used co cleave a substrate with the enzyme. The enzyme is used co cleave tyral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a/*tag= a//bound moiety= "RzB fragment of bimolecular ribozyme" /notel="Porms double-stranded region with bases 20-16 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /bound_moiety= "Ribozyme substrate Pl.1"
/note= "Forms double-stranded region with bases 11-6 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /bound_moiety= "RzB fragment of bimolecular ribozyme" /note= "Forms double-stranded region with bases 8-1 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNUGGCCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGGUCCGACCUGGGCUUCGGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                   New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                            Match
Local Similarity 78.9%; Pred. No. 0.00032;
es 45; Conservative 6; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleotide sequence of bimolecular ribozyme RzA fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; 88.
                                                                                                                                                                                                                                                                                                      Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                        Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                     Example 1; Fig 2; 52pp; English.
                        Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57639 standard; RNA; 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20. .25
/*tag= (
(UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                            WPI; 2000-096791/08
                       Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57639;
                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                g
```

```
This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*CNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate equence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ss; cytostatic; virucide; dengue virus; recombinant replicon; deletion; preM protein; C protein; NS1 protein signal; vaccine; cervical cancer; viral disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                               New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 62.1%; Score 35.4; DB 3; Length 37; Best Local Similarity 81.1%; Pred. No. 1.8; Matches 30; Conservative 6; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHANGHAI TENGEN BIOMEDICAL CO LTD.
TENGEN BIOMEDICAL CO.
BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                     Lafontaine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 5; Fig 4; 52pp; English.
                                                                                                                                                                                                                                                                  Ananvoranich S,
                                                              99WO-CA000391
                                                                                                                                 98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JAN-2004; 2004WO-CN000088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003CN-00115272
2003CN-00115273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADR47040 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                            (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                             WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2004072274-A1.
                                                                                                                                 29-APR-1998;
                                                              29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JAN-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-AUG-2004.
04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADR47040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SHAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BEIJ-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TENG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
```

```
A dengue virus recombinant replicon has a deletion of the complete coding sequence for prem protein of dengue virus and also includes elements of e.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of obtained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can certical cancer and viral diseases. Such vaccines can cefficiently express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the cody's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a genecaty system using of the full-length dengue virus cDNA clone (pRS/FLD2). The recombinant virus vectors were transfected into baby hamser kidney (BHK) cells to enable the screening of BHK-21 Tet-off cell lines. This sequence corresponds to an oligonucleotide used in the
                                                                                         Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors like cervical cancer and viral diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virucide; Japanese encephalitis B virus; bivalent vaccine; hepatitis B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD. (TENG-) TENGEN BIOMEDICAL CO. (BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :||||||:||:||||||:||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53.3%; Score 30.4;
                                                                                                                                                                                                                                     Example 4; SEQ ID NO 37; 38pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCR primer 5' HDVr, seq id 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAR-2003; 2003CN-00115912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADT48965 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19; Conservative
                            WPI; 2004-625870/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCR; primer; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004082712-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-SEP-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADT48965;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TENG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADT48965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THE STANTAGE BY SECTION OF SECTIO
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.

WPI; 2004-699719/68.

Pang X;

ပ်

ö

Gaps ; 0

```
ö
                                                  The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its self-replication function. The virus is useful in producing the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuated encephalitis B virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 alphavirus RNA polymerase recognition sequence. Inactivation of the viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The amplified DNA sequences were used in the construction of a eukaryotic layered vector initiation system (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an initial transcription of the subgenomic fragment is prevented.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-etructural protesin; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                   DB 13; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Driver DA,
                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                            Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chang SM, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                 53.3%; Score 30.4; I 59.4%; Pred. No. 75;
                                                                                                                                                                                                                                                                                                                                                                       12; Mismatches
                  Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 2; Page 68; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-00122791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94US-00198450
                                                                                                                                                                                                                                                     example from the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (VIAG-) VIAGENE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAQ86173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ86173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
à
                                                                                                                                                                                                                                                                                                                                                                                                                                              d
```

35

8888888

a

```
4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG
                                                                                                                                                                                                                           ribozyme; ss.
                                                                                                                                                                                                                                                                               WO9617072-A2
                                                                                                                                                                                                                                                                                                                                 30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                       18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                           30-NOV-1994;
                                                                                                                                                                                                                                                                                                       96-JUN-1996
                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Belli BA;
                                                                                                                      AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                 RESULT 9
                                                                                AAT31151
                           셤
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequences given in AAO86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are eukaryotic layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymérase recognition sequence. Inactivation of the viral junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                       Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polo JM
                                                                                                                      ö
                                                                                            DB 2; Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jolly DJ, Driver DA,
                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                   Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                   Sequence 51 BP; 9 A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                              TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                         53.3%; Score 30.4; I
59.4%; Pred. No. 76;
iive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chang SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93US-00122791
94US-00198450
                                                                                                                                                                                                                                        AAQ86204 standard; DNA; 52
                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                       Local Similarity 59.4
les 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ibanez CE,
                                                                                                                                                                                                                                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (VIAG-) VIAGENE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9507994-A2
                                                                                                                                                                                                                                                                                           25-MAR-2003
23-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                   AAQ86204;
                                                                                             Query Match
Best Local S
                                                                                                                       Matches
```

```
Primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 839-887. It was used with reverse primer HDV49-XC (AAT30850) for the PCR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SINZ76-SPE (AAT31153), is used to amplify a fragment contg. Sindbis 5' end sequences fused to HDV sequences. Overlapping synthesis is used in a second round of PCR using primers HDV49-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction region/Sindbis structural protein genes/Sindbis 3'-end untranslated region, designated pd5'26s. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jolly DJ, Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                            Alphavirus, Sindbis virus, vector; gene therapy, vaccine;
polymerase chain reaction, PCR; primer; hepatitis delta virus; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 59.4%; Score 30.4; DB 2; Length 52; les 19; Conservative 12; Minner 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chang SMW,
1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 7; Page 120; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dubensky TW, Polo JM, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95WO-US015490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94US-00348472
                                                                                                                                                                                                                                                                                                                                                                   HDV reverse primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                 AAT31151 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAT30817 standard; DNA; 52
                                                                                                                                                                                                                                                                                                          12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT30817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT30817
ID AAT3
XX
AC AAT3
```

ö

ö

Gaps

ö

Query Match 53.3%; Score 30.4; DB 2; Length 52; Best Local Similarity 59.4%; Pred. No. 76; Matches 19; Conservative 12; Mismatches 1; Indels

for producing

Polo JM;

Ą,

```
PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression casette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA alpha: virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                            Driver
                                                                                                                                                                                                               DNA alpha:virus structural protein expression cassettes recombinant alpha:virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seguence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :
                                                                                                                                            Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53.3%; SCOre 30.4; I
59.4%; Pred. No. 76;
tive 12; Mismatches
                                                                                                                                            Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jolly DJ,
                                                                                                                                                                                                                                                                    Example 3; Col 69; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-00741881.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Forward PCR primer HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42426 standard; DNA;
                                                                                                                                            Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORP.
                                                                                                         (CHIR ) CHIRON CORP.
                                                                                                                                                                            WPI; 1998-446089/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1998-446089/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
nes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CHIR ) CHIRON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-FEB-1994;
                                                    20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-MAR-1995;
                    18-FEB-1994;
30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US5789245-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV42426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    primer SHDVIF (AAT30816) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDV17-68 (AAT30817) and reverse primer SHDV84R (AAT30818) to generate an HDV ribozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                              Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                          Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer; polymerase chain reaction; PCR; ELVIS; ribozyme; HDV; hepatitis delta virus; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                            Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful in methods of gene therapy and for vaccine prodn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      primer HDV17-68 of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53.3%; Score 30.4; 1
59.4%; Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                            Polo JM, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 3; Page 85; 256pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP
                                                                                                                                                                                                                                                                                    94US-00348472.
95US-00376184.
95US-00405827.
                                         HDV ribozyme primer HDV17-68
                                                                                                                                                                                                                                                     95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-00741881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                           (CHIR ) CHIRON VIAGENE INC.
       12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42394 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                      30-NOV-1994;
18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                              Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-0CT-1996;
                                                                                                                                                                                  WO9617072-A2
                                                                                                                                                                                                                                                       30-NOV-1995;
                                                                                                                                                                                                                   06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nested PCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                               Synthetic.
```

Query Match

Matches

셤 8

AAV42394;

Belli BA;

ö

Gaps

ö

Ĕ

Polo

Gaps

ö

Indels

```
system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral CDNA which initiates, in a susceptible target cell, 5' to 0' viral CDNA which initiates, in a susceptible target cell, 5' to 0' synthesis of RNA from the viral CDNA. The RNA comprises a vector construct which autonomously amplifies in the call and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimmlates an immune response vithin an animal. The system is useful for stimulating an immune response to an antigen by introducing the vector inco target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I restricted or an HLA class II-restricted immune
The specifiaction describes an eukaryotic layered vector initiation
                                                                                                                                                                                                                                                                                                                                                                                             53.3%; Score 30.4; DB 2; Length 52; 59.4%; Pred. No. 76;
                                                                                                                                                                                                                                                                                         response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                              Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                    12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-0073915B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Reverse PCR primer HDV17-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV60185 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sindbis, PCR primer; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DUBENSKY T W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRIVER D A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POLO J M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV60185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POLO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOLL/)
DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Driver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV60185
ID AAV6
  88999999999988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jolly DJ, Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
53.3%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 76;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 3; Col 71-72; 144pp; English
                                                    Example 7; Col 103; 140pp; English.
  recombinant alpha: virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV60154 standard; DNA; 52 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93US-00122791.
94US-00198450.
94WO-US010469.
94US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-0073915B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sindbis, PCR primer, 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POLO J M.
DUBENSKY T W.
JOLLY D J.
DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lmmune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-NOV-1994;
18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-FEB-1994;
14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV60154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POLO/)
(DUBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (JOLL/)
(DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV60154
AAV60154
AAV60154
AC AAV60
AC AAV60
AC AAV60
DT 25-MA
DT 25-MB
DT 
  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
```

```
Bukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                         Eukaryotic layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCR primers AAV60184-85 are used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral cDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral cDNA.
                                                                                                                                                                                                                                                                                                                                                       Dubensky TW
                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 5; Col 108; 144pp; English.
                                                                                                                                                                                                                                                                                                                                                       Jolly DJ,
                                                                                                                                                                                                                93US-00122791.
94US-00198450.
94WO-US010469.
                                                                                                                                                                                                                                                   94US-00348472.
95US-00376184.
95US-00404796.
```

```
ö
                     cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I restricted or an HLA class I restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
comprises a vector construct which autonomously amplifies in the
                                                                                                                                                                                                                                                                                                          O; Gaps
                                                                                                                                                                                                                                                       53.3%; Score 30.4; DB 2; Length 52; 59.4%; Pred. No. 76; ive 12; Mismatches 1; Indels
                                                                                                                                                                                                              Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                   19; Conservative
                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                       Matches
  8888888888888
                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                 유
```

Driver DA; Alphavirus vectors constructs containing a 5' promoter of viral CDNA in vitro transcription - used in gene therapy. Reverse PCR primer HDV17-68 used to amplify Hepatitis delta virus. Belli BA, Ibanez CE, Alphavirus vector construct; gene therapy; PCR primer; ss. Chang SMW, Jolly DJ, Dubensky TW, 94US-00198450. 94US-00348472. 95US-00376184. 95US-00404796. AAV70746 standard; DNA; 52 BP 96US-00739167 93US-00122791 (revised)
(first entry) WPI; 1999-044581/04. (CHIR ) CHIRON CORP. Hepatitis D virus. 18-FEB-1994; 30-NOV-1994; 20-JAN-1995; 20-MAR-2003 02-FEB-1999 30-0CT-1996; .5-SEP-1993; US5843723-A 01-DEC-1998 15-MAR-1995 Synthetic AAV70746; Polo JM; RESULT 15
AAV70746
ID AAV70746
ID AAV70746
ID AAV70746
ID AAV70
XX AAV70746
ID 20-MP
DT 20-MP
DT 20-MP
DT 20-MP
DT 20-MP
DT 20-MP
DT 20-MP
XX A1ph
XX BP 15-PP 15-

PCR primers AAV70745-46 are used to amplify part of the hepatitis delta virus (HDV) genome. The amplified product is used in the production of the alphavirus vector constructs of the invention. These constructs comprise a promoter 5' of viral cDNA which initiates the synthesis of RNA from the viral cDNA by in vitro transcription, followed by a 5' sequence which initiates transcription of alphavirus RNA, followed by a nucleotide sequence encoding alphavirus nonstructural proteins, a viral junction region which has been inactivated such that viral transcription of a subgenomic fragment is prevented, an internal ribosome entry site or a subgenomic which promotes ribosome read through between adjacent reading frames, and an alphavirus RNA polymerase recognition sequence. The recombinant alphavirus vectors can be used for gene therapy. (Updated on 20-MAR-2003 to correct PR field.)

Example 7; Col 103; 140pp; English.

```
ö
                                                                                Gaps
                                                                                ö
                                               52;
                                                                                1; Indels
                                           53.3%; Score 30.4; DB 2; Length
59.4%; Pred. No. 76;
iive 12; Mismatches 1; Indels
               Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                   1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                   Search completed: March 15, 2005, 16:13:00 Job time : 319.25 secs
                                               Query Match 53.3
Best Local Similarity 59.4
Matches 19; Conservative
X S
                                                                                                                     ઠ
                                                                                                                                              원
```

```
4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
ò
                                                                                                                                                                                                                                                                                                                                                                                                                          March 15, 2005, 15:26:58 ; Search time 94.75 Seconds (without alignments) 984.356 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 40, 3
Sequence 40, 3
Sequence 7, A
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 40,
                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                    1 ggguccaccuccucgcggun.....uucgcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*

(cgn2_6/ptodata/1/ina/5B_COMB.seq:*

(cgn2_6/ptodata/1/ina/6A_COMB.seq:*

(cgn2_6/ptodata/1/ina/6B_COMB.seq:*

(cgn2_6/ptodata/1/ina/RCTUS_COMB.seq:*

(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
       GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5-09-415-900-39
5-09-507-362-39
5-08-238-963A-19
5-08-422-978-3088
5-08-646-695-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5-09-415-784-39
5-09-415-785A-39
5-08-944-465-39
                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -08-485-355B-7
                                                                                                                                                              1202784 segs, 818138359 residues
                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                           nucleic search, using sw model
                                                                                                                                    IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                 US-09-699-667E-61
57
                                                                                                                                                                                                                                                                                                                                                                                             Query
Match Length
                                                                                                                                                                                                  Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                     Scoring table:
                                            OM nucleic
                                                                                                                    Sequence:
                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                  Database
                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                              Result
No.
```

```
ö
                               Sequence 1875; App Sequence 373; App Sequence 17, Appl Sequence 18, Appl Sequence 1234, App Sequence 39, Appli Sequence 38, Appli Sequence 5, Appli
                                                                                                                                                                                                                                                     Sequence 52, A
Sequence 482,
Sequence 249,
Sequence 482,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Danez, Carlos E.
APPLICANT: Only, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Balli, Barbara A.
TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6100 Columbia Center, 701 Fifth Avenue
                                                                                                                           Sequence 1
Sequence 9
Sequence 3
Sequence 5
Sequence 1
Sequence 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 53.3%; Score 30.4; DB 1; Length 52; Best Local Similarity 59.4%; Pred. No. 8.2; Matches 19; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC comparatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMASters, David D.
REGISTRATION NUMBER: 33,963
ATTORNEY/AGENT NUMBER: 33,963
ATTORNEY/AGENT NUMBER: 33,963
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAX: (2066) 622-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGRAT: S. Dase pairs
TYPE: nucleic acid
                                                                 US-09-112-0868-7
US-08-975-238-5
US-09-094-338-C-18
US-08-679-645-1234
US-09-216-584-38
US-09-216-584-38
US-09-401-063-1875
US-09-443-199C-555
                                   -08-985-162-1875
-08-998-099-373
                                                                                                                                                                                                                                                                      US-08-974-549A-482
US-08-912-951-249
US-09-402-181B-482
                                                                                                                                                                                                                                  -08-120-827-52
-08-478-675-52
                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 40, Application US/08741881
Patent No. 5789245
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
US-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-741-881-40
```

```
LENGTH: 52 base pairs
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 40, Application US/08739158
Sequence 40, Application US/08739158
Patent No. 5814482
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Jolly, Douglas J.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
TITLE OF INVENTION: EUVARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSES: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Johly, Douglas J.
APPLICANT: Johly, Barbara A.
TITLE OF INVENTION: BURARYOTIC LAYERED VECTOR INITIATION SYSTEMS OVERSPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 30-000
CLASSIFICATION: 435
ATTONEY/AGENT INFORMATION:
NAME: MCMAGEERS. David D.
REGISTRATION NUMBER: 33,963
REFERENCE/COCKET NUMBER: 930049.423C6 / 1146.007
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPAX: (206) 622-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
CLASSIFICATION: 4355
                                                                                                                                                                                                                                                                                                                                                                                                                  3: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
1 TCCACCTCGTCGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.3%; Score 30.4; D
59.4%; Pred. No. 8.2;
tive 12; Mismatches
                                                                                                                                Sequence 80, Application US/08741881
Patent No. 5789245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ouery Match
Best Local Similarity 59.44
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 6300 (CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
STREET: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
US-08-741-881-80
                                                                                     RESULT 2
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
US-08-739-158-40
                        쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

```
COUNTY: US

COMPUTES READABLE FORE

MINITIMA TYPE: PORPOY disk

CHERRY ARELLANION MINITIMA PARABOR #10, Version #1.25

CHERRY ARELLANION MINITIMA PARABORATION:

MINIMA MANITIMA THE PORPOY DISK

TELERRY: CORO, #24

ATTORESENEZ/DOCTEW MINITIMA 1049; 1314; SCORE #10.4; DR 1; Length #22;

MINITIMA TORNES/DOCTEW MINITIMA 1049; 1416; DR 1;

MINITIMA TORNES/DOCTEW MINITIMA 1049; 1416; DR 1;

MINIMA TREARY: CORO, #22.400

MINITIMA TORNES/DOCTEW MINITIMA 1049; 1416; DR 1;

MINITIMA SHALLON TORNES/DOCTEW MINITIMA 1049; 1416; DR 1;

MINITIMA MINITIMA SHALLON TORNES/DOCTEM 1049; 1416; DR 1;

MINITIMA MINITIMA TORNES/DOCTEM 1049; 1416; DR 1;

MINITIMA MINITIMA SHALLON
```

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Jolly, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EURARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Dance Carlos W.
APPLICANT: Carlos W.
APPLICANT: Olly, Douglas J.
APPLICANT: Dilver, David A.
APPLICANT: Briver, David A.
APPLICANT: Belli, Babara A.
ITILE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                               STATE: Washington
COMPUTRY: US
ZIP: 98104-7092
COMPUTRY: US
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
COMPUTER: IBM FC compatible
COMPUTER: IBM FC compatible
COMPUTER: TABLE FORM:
SOFTHING SYSTEM: PC-DOS/MS-DOS
SOFTHING SYSTEM: PC-DOS/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGANT INFORMATION:
NAME: MCMASters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
TELECOMMUNICATION INFORMATION:
TELEPRAN: (206) 622-6931
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: SEQ ID NO: SEQUENCE TIVER: INCLESIC SCIENCE
CTELEFAX: SINGLE STATES:
LENGTH: SEQ ID NO: SEQUENCE TIVER: INCLESIC STATES
TYPE: INCLESIC SCIENCE
CTELEFAX: SINGLE
                                                                                                                                                                                                                                E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 59.4%; Pred. No. 8.2;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 40, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION:
    Dubensky Jr, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: EUNUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                     STREET: 6300 Colum
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 6300 Colum
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Date, John M.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STIRET: 6300 Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..
0
                                                                                                                 53.3%; Score 30.4; DB 1; Length 52, 59.4%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 52;
                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C7 / 1146.008
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARATTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Ploppy disk
COMPUTER: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                       TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                       Sequence 40, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 80, Application US/08739167
Patent No. 5843723
GENERAL INFORMATION:
                                                                                                                                       Best Local Similarity 59.49
Matches 19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 59.4%
...hes 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
TYPE: nucleic acid
STRANDEDNESS: sing
                                             ; TOPOLOGY: linear
US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-739-167-40
                                                                                                                 Query Match
```

셤

```
Conservative
                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                 Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. 6015694
GENERAL INFORMATION:
                                                                                                                                                                                         US-08-931-869-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-931-869-40
   US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                 .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 80, Application US/08404796

Sequence 80, Application US/08404796

Patent No. 6015686

GENERAL INFORMATION:
APPLICANT: Dio, John M.
APPLICANT: Dolo, John M.
APPLICANT: Chang, Stephen M.
APPLICANT: Chang, Stephen M.
APPLICANT: Driver, David A.
APPLICANT: Balli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columnia
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                 ..
0
                                                                                                                                                                                                                                                                                                                                   DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:

SOFTWARE:

CURRENT APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION TOWNER:

CLASSIFICATION:

ATTORNEY AGENT INFORMATION:

NAME: MCAMBER: 33,963

ATTORNEY AGENT INFORMATION:

NAME: MCAMBER: 33,963

REFERENCE POCKET NUMBER: 33,963

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION NORDER: (206) 622-6031

INFORMATION FOR SEQ ID NO: 80:

SEQUENCE CHARACTERISTICS:

LENGTH: 52 Dase pairs
4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                  53.3%; Score 30.4; D
59.4%; Pred. No. 8.2;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 59.4%
Matches 19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington
                                                                                                                                                                                                                                                                                       COPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: Wart's
                                                                                                                                                                                                                                                                                                    US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                            임
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Change, Stephen M.W.
APPLICANT: Change, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Belli, Barbara A.
ADDRESSES: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                       ö
     DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 3; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IMP Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION: 435
PRICA APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR.1995
ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
RESISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,049,423C5 / 1146.006
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        930049.423C5 / 1146.006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
53.3%; Score 30.4; D. 59.4%; Pred. No. 8.2; ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53.3%; Score 30.4; D 59.4%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12; Mismatches
                                                                                                                                                                                                                                                                                            Sequence 40, Application US/08931869
Patent No. 6015694
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-931-869-80
; Sequence 80, Application US/08931869
; Patent No. 6015694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
```

us-09-699-667e-61.siz.rni

```
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSES: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Seattle
CITY: Seattle
COMPUTR: Washington
COMPUTR: 98104-7092
COMPUTR: EADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTR: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATCHTIN Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-Jul-1999
CLASSIFICATION NUMBER: US/09/350,399
ATTORNEY/AGENT INFORMATION:
NAME: MCMSELEATION WUMBER: 33,963
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 93049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3; Length 52;
                                                                                                                                                                                                    NAME: MCMSSters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICAL/DOCKET NUMBER: 930049.423D1 / 1146.010
TELEPHONE: (206) 622.4900
TELEPAX: (206) 682-6031
INFORMATION FOR SEQ ID No: SEQUENCE CHARACTERISTICS:
LENTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                       SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-Jul-1999
CLASSIFICATION: 
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 53.3%; Score 30.4; Di
Best Local Similarity 59.4%; Pred. No. 8.2;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQ ID NO: 80: US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 80, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (206)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JS-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EMERRYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                APPLICANT: Polo, John M.
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Orly, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53.3%; Score 30.4; DB 3; Length 52; 59.4%; Pred. No. 8.2; 1; Indels tive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                     OCHESCEE SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
CONFUTER Flopy disk
COMPUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: BEADABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: BEATING NOTA:
COMPUTER: BEATING NOTA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 16-SEP-1997
CLASSIFICATION NUMBER: US 08/404,796
FILING DATE: 15-MRR-1995
ATTORNEY/AGET INFORMATION:
NAME: MCMBSTER: US 08/404,796
FILING DATE: 15-MRR-1995
ATTORNEY/AGET INFORMATION:
NAME: MCMBSTER: US 08/404,796
TELECOMMUNICATION INFORMATION:
TELEFAX: (206) 62-2-4900
TELECOMMUNICATION INFORMATION:
TELEFAX: (206) 62-2-4900
TELEFAX: (206) 63-2-4900
TELEFAX: (2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSER: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Scattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TOPOLOGY: linear
US-08-931-869-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

ö

Gaps ö

g

ŝ

```
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, 11ya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
                  Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSES: OPPEMBIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC_Compatible
COMPUTER: IBM PC_COMPATIBLE
COPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: <unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNAY AGENT INPORMATION:

NAME: Cullman, Louis C.

REGISTATION UNDERR: 39,645

REPERBUCADOCKET NUMBER: 20263.332 / 1146.020

TELECOMMUNICATION INFORMATION:

TELEPHONE: (949) 823.6000

TELEPHONE: (949) 823.6100

INFORMATION POR SEQ ID NO: 80:

SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53.3%; Score 30.4; Dl
59.4%; Pred. No. 8.2;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                     ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 39, Application US/09415784
Patent No. 6391632
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Seattle
STATE: Washington
COUNTRY: USA
                                                                                                                                                                                              STATE: CALIFORNIA COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match
Best Local Similarity 59.4*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                             ô
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
  DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                           Indels
                                                                                                                                                                                                                                                                                                     APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Edilos, Carlos B.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARRE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/09/236,140A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INPORMATION:
NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY STREET: 840 NEWPORT CENTER DRIVE, SUITE 700 CITY: NEWPORT BEACH
                                                                                                               1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                      4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
53.3%; Score 30.4; Di
Best Local Similarity 59.4%; Pred. No. 8.2;
Matches 19; Conservative 12; Mismatches
53.3%; Score 30.4; D 59.4%; Pred. No. 8.2;
                                           12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; SEQUENCE DESCRIPTION: SEQ ID NO: 40:
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dubensky Jr, Thomas Polo, John M.
Ibanez, Carlos E.
                                                                                                                                                                                                                                       Sequence 40, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 22-Jan-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (949) 823.6000
949) 823.6100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 80, Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (949) 823.6
INFORMATION FOR SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: RECONNUMBER OF SEQUENCES: 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: CALIFORNIA COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
                                           19; Conservative
                      Best Local Similarity
                                                                                                                                                                                              RESULT 13
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
US-09-236-140A-80
  Query Match
                                           Matches
```

à g

ö

Gaps

ö

us-09-699-667e-61.siz.rni

```
ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/415,784

FILING DATE: 08-Oct-1999
CLASSIFICATION: AUNknown.

ATTORNEY/AGENT INFORMATION:

NAME: MCMasters, David D.

REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.457D1 /1196.006

TELECHOMUNICATION INFORMATION:

TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: C100 0539:

SEQUENCE CHARACTERISTICS:

LENGTH: 56 base pairs

TYPE: nucleic acid
STRANDEDDESS: single

TOPOLOGY: linear

US-09-415-784-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 50.9%; Score 29; DB 3; Length 56; Best Local Similarity 58.6%; Pred. No. 25; Matches 17; Conservative 12; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

Search completed: March 15, 2005, 20:44:21 Job time : 96.75 secs

(OPRE) NAALE 32A9 21H)

```
US-10-346-880-40
                                                                                                                                                                                                          υυ
                                                                                                                                                                                                                                                                                                                                                  O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        υυ
                                                       υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40, Appl
80, Appl
39, Appl
39, Appl
6071, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10, Appl
10629, 7
20125, 7
                                                                                                                                                                                                                                                                                March 15, 2005, 15:52:23 ; Search time 372.25 Seconds (without alignments) 910.856 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Department of the sequence Department o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggguccaccuccucgcggun.....uucgcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/US00_PUBCOMB.seq:*
| CGn2_6/ptodata/1/pu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5307542
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-346-880-40
US-10-346-880-80
US-10-150-407-40
US-10-150-407-80
US-10-391-441-39
US-09-908-975-6071
US-09-908-975-13039
US-09-908-975-13039
US-09-908-975-13039
US-09-908-975-13039
US-09-908-975-13039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5537552 seqs, 2974263231 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Applications NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-699-667E-61
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1111111111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          533.3
5533.3
55033.3
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550.0
550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

Sequence 3088, Ap Sequence 22269, A Sequence 22269, A Sequence 18120, Sequence 18125, A Sequence 381, App Sequence 382, App Sequence 381, App Sequence 3, Appli Sequence 3, Appli Sequence 1, Appli Sequence 1, Appli Sequence 2, Appli Sequence 1, Appli Sequence 2, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 2, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 38, Appli Sequence 316, Appli Sequence 316, Appli Sequence 316, Appli Sequence 316, Appli Sequence 226, Appli Sequence 316, Appli App	Sequence 11877, A Sequence 915, App Sequence 623, App Sequence 60, Appl Sequence 249, App Sequence 482, App Sequence 482, App
110 - 349 - 143 - 308   109 - 908 - 975 - 222   100 - 908 - 975 - 222   100 - 908 - 975 - 222   100 - 908 - 975 - 183   100 - 9864 - 636A - 38   100 - 9864 - 839 - 38   100 - 972 - 834 - 3   100 - 972 - 834 - 3   100 - 972 - 834 - 3   100 - 972 - 844 - 3   100 - 972 - 844 - 3   100 - 972 - 844 - 3   100 - 972 - 844 - 3   100 - 972 - 844 - 3   100 - 972 - 844 - 3   100 - 972 -	US-00-908-975-18877 US-10-035-833A-915 US-10-035-833A-6223 US-10-044-692-249 US-10-044-692-249 US-10-044-539-249 US-10-044-539-249
11000000000000000000000000000000000000	10 17 17 17 15
4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	64472666 644444
44mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	
2222 23.2 2222 23.2 23.2 23.2 23.2 23.2	21.6 21.7 21.2 21.2 21.2 21.2
11111111111111111111111111111111111111	0 0 1 2 4 4 4 4 9 0 0 1 2 6 4 3 2 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0

## ALIGNMENTS

US-10-345 B80-40

Fublication No. US20030232035A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Driver, David A
APPLICANT: Driver, David A
APPLICANT: Belli, Barbara A
TITLE OF INVENTION EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
FILE OF INVENTION NUMBER: 09/10/146,880
CURRENT PILING DATE: 2000-02-116
PRIOR FILING DATE: 1996-10-30
PRIOR FILING DATE: 1996-10-30
PRIOR FILING DATE: 1995-01-18
PRIOR FILING DATE: 1995-01-18
PRIOR PELING DATE: 1994-01-18
PRIOR PELING DATE: 1994-01-18
PRIOR FILING DATE: 1994-02-18
PRIOR FILING DATE: 1993-09-15
PRIOR FILING DATE: 1993-09-15 SOFTWARE: FastSEQ for Windows Version 3.0

> υu υ

```
APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JULY 10-19-880-80-80

Sequence 80, Application US/10346880

Publication No. US20030232035A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Danez, Carlos E
APPLICANT: Dally, Ducglas J
APPLICANT: Dally, Ducglas J
APPLICANT: Dally, Barbara A
ITTLE OF INVENTION: BUYARYOTIC LAYERED VECTOR INITIATION SYSTEMS
FILE REFERENCE: PP01146.213 (CHIR-1146/11US)
CURRENT APPLICATION NUMBER: 09/503.138
FRIOR APPLICATION NUMBER: 09/191,747
FRIOR APPLICATION NUMBER: 09/191,747
FRIOR APPLICATION NUMBER: 08/139,199
FRIOR FILING DATE: 1996-10-15
FRIOR APPLICATION NUMBER: 08/316,184
FRIOR APPLICATION NUMBER: 08/312,791
FRIOR FILING DATE: 1994-02-18
FRIOR FILING DATE: 1994-02-18
FRIOR FILING DATE: 1993-09-15
NUMBER OF SEQ ID NOS: 128
SOFTWARE: FREUSEQ FOR Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68
US-10-346-880-80
                                                                                                                                                                                                    ; OTHER INFORMATION: Artificial sequence: nested primer HDV17-68 US-10-346-880-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52;
                                                                                                                                                                                                                                                                                                                                                                Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 17;
                                                                                                                                                                                                                                                                                                                                                                DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                           53.3%; Score 30.4; Di
59.4%; Pred. No. 28;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53.3%; Score 30.4; D
59.4%; Pred. No. 28;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
US-10-150-407-40
; Sequence 40, Application US/10150407
; Publication No. US20040029278A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 59.33
The state of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.4°
Matches 19; Conservative
SEQ ID NO 40
LENGTH: 52
TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
```

```
ö
Polo, John M.
Jolly, Douglas J.
Driver, David A.

TITLE OF INVENTION: EUTRARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIFICATION NUMBER: US/09/350,522
PRIOR APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Jul-1999
ATTORNEY/AGMAINTION: NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 53.3%; Score 30.4; DB 17; Best Local Similarity 59.4%; Pred. No. 28; Matches 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQ ID NO: 40: US-10-150-407-40
                                                                                                                                                                                                                     ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (206) 682-6
INFORMATION FOR SEQ ID NO: 40:
                                                                                                                                                                CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (206)
                                                                                                                                                                                                           COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: US
```

ö

Indela

; 0

DB 10; Length 56; 84;

```
50.9%; Score 29; DB 58.6%; Pred. No. 84; ive 12; Mismatches
                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLGGY: linear
US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 39:
                                                                                                                               Query Match
Best Local Similarity 58.6'
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                            US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
US-09-507-362-39
US-09-507-362-39
Sequence 39, Application US/09507362
Publication No. US20030096397A1
GENERAL INFORMATION:
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 52;
                                                                                                      APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Jul-1999
ATTORNEY/AGENT INFORMATION:
NAME: MCAMBERE: Novid D.
REGIETRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/507,362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
53.3%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 28;
Matches 19; Conservative 12; Mismatches
      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                FILING DATE: 17-May-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
                                                                                                                                                                                                                                                           TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 18-Feb-2000 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                            LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                 TELEFAX: (206)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
```

```
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                 TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA

ZIP: 98104-7092

COUNTRY: USA

ZIP: 98104-7092

COUNTRY: USA

ZIP: 98104-7092

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IM PC Compatible

COMPUTER: THE PC COMPATIBLE

COMPUTER: DATE: DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/03

CLASSIFICATION: CURROWN>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/507,362

RILING DATE: 18-Feb-2000

ATORNEY/AGENT INFORMATION:

NAME: MOMBSECER: David D.

REGISTRATION NUMBER: 33,963

REDERBOCK-POCKET NUMBER: 33,963

REDERBOCK-POCKET NUMBER: 930049.457D6 /1196.011

TELECOMMUNICATION INFORMATION:

TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 84;
12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 50.9%; Score 29; Best Local Similarity 58.6%; Pred. No. 8 Matches 17; Conservative 12; Mismatch
Sequence 39, Application US/1039141
Publication No. US2003232058A1
GENERAL INFORMATION:
APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Bolo, John M.
Bolli, Barbara A.
Schlesinger, Sondra
                                                                                                                                                                                                                                                                                                    SYNTHESIS
                                                                                                                                                                                               Dryga, Sergey A.
Frolov, Ilya
```

```
Sequence 10, Application US/10380438
Publication No. US20040053829A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Pizzenmaier, Klaus
TITLE OF INVENTION: FUBION PROTEIN FROM ANTIBODY CYTOKINE-CYTOKINE INHIBITOR (SELECTOF
TITLE OF INVENTION: FUBION PROTEIN FROM ANTIBODY CYTOKINE-CYTOKINE INHIBITOR (SELECTOF
TITLE OF INVENTION: FUBION PROTEIN FROM ANTIBODY CYTOKINE-CYTOKINE INHIBITOR (SELECTOF
TITLE OF INVENTION: FUBION PROTEIN US/10/380,438
CURRENT APPLICATION NUMBER: DE 100 45 592.1
RRIOR APPLICATION NUMBER: DE 100 45 592.1
RRIOR APPLICATION NUMBER: DE 100 45 592.1
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENT LING DATE: 2000-09-15
NUMBER OF SEQ ID NOS: 18
SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10629, Application US/09908975
; Publication No. US20030165843A1
; Publication No. US20030165843A1
; GENBRAL INFORMATION:
    APPLICANT: MASSERMAN, Alon
; APPLICANT: MINTZ, Liat
; TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE \( \); TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE \( \); TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTION NUMBER: US/09/908,975
; CURRENT FILING DATE: 2001-07-20
; PRIOR APPLICATION NUMBER: US 60/221,607
; PRIOR PILING DATE: 2000-07-28
; NUMBER OF SEQ ID NOS: 32337
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 10629
; LENGTH: 60
; LENGTH: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Description of the artificial sequence: Primer 1 for OTHER INFORMATION: the amplification of the trimerization of chicken tenascin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
42.1%; Score 24; DB 17; Length 47
Best Local Similarity 52.5%; Pred. No. 4e+03;
Matches 21; Conservative 9; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 GGGCCCACAGCCAGCCGCCTGTGGCTGTGCGGCTGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
42.1%; Score 24; DB 10;
Best Local Similarity 45.0%; Pred. No. 4.1e+03;
Matches 18; Conservative 12; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 20125, Application US/09908975 ; Publication No. US20030165843A1
                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-09-908-975-20125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-908-975-10629
US-10-380-438-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-380-438-10
                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                            Sequence 6071, Application US/09908975

| Sequence 6071, Application US/09908975
| Publication No. US20030165843A1
| GENERAL INFORMATION:
| APPLICANT: SHOSHAN, Alon
| APPLICANT: MINTZ, Eli
| APPLICANT: MINTZ, Liat
| APPLICANT: WINTER: US 60/287, 724
| PRIOR FILING DATE: 2001-05-02
| PRIOR FILING DATE: 2000-07-28
| NUMBER OF SEQ ID NOS: 32337
| SOFTWARE: Patentin version 3.0
| LENGTH: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USCOURT OF 908-975-13039/c

is Sequence 13039, Application US/09908975

is Publication No. US20030165843A1

is Publication No. US20030165843A1

is RAPPLICANT: SHOSHAN, Avi

is APPLICANT: WASSEMAN, Alon

APPLICANT: MINITZ, Liat

APPLICANT: MINITZ, Liat

APPLICANT: MINITZ, Liat

APPLICANT: PAIGLER, Simchon

ITILE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE

ITILE OF INVENTION: THAT POPULATE A TRANSCRIPTOME

ITILE OF INVENTION: USGNOODED 107-20

CURRENT APPLICATION NUMBER: US 60/221,607

PRIOR FILING DATE: 2001-05-02

PRIOR FILING DATE: 2000-07-28

NUMBER OF SEQ ID NOS: 32337

SOOFTWARE: PALENTIN VERSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10; Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GUCCACCUCGCGGUNNNNNNNNGGGCAUGCGGCUUCGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45.3%; Score 25.8; DB 10; Length 46.7%; Pred. No. 1e+03; Live 12; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46 GTCCACGTCCTCGGCCTCCTGGATGGCGACGCGGATCTGCACCCCC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 CACCUCCUCGCGGUNNNNNNUGGGCAUGCGGCUUCGCAUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 44.9%; Score 25.6; DB 10;
Best Local Similarity 45.0%; Pred. No. 1.2e+03;
Matches 18; Conservative 13; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 46...
Best Local 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens
US-09-908-975-6071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , ORGANISM: Homo sapiens
US-09-908-975-13039
                               US-09-908-975-6071/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 13039
LENGTH: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
APPLICANT: SHOSHAN, Avi
APPLICANT: WASSERMAN, Alon
APPLICANT: WASSERMAN, Alon
APPLICANT: MINTZ, Bli
APPLICANT: MINTZ, Liat
APPLICANT: FAIGLER, Simchon
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE 1
TITLE OF INVENTION: THAT POPULATE A TRANSCRIPTOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: MASSERMAN, Alon
APPLICANT: MASSERMAN, Alon
APPLICANT: MINTZ, Eli
APPLICANT: MINTZ, Liat
APPLICANTON: THAT POPULATE A TRANSCRIPTOME
TITLE OF INVENTION: UNMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2000-07-28
NUMBER OF SEQ ID NOS: 32337
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 23713
LENGTH: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 GGTCCACATCCAAGCCTTCATCGTTTGTCCTCCGGGTTC 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUC 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
39.6%; Score 22.6; DB 10;
Best Local Similarity 39.6%; Pred. No. 1.2e+04;
Matches 21; Conservative 13; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match

40.4%; Score 23; DB 10;
Best Local Similarity 41.0%; Pred. No. 8.9e+03;
Matches 16; Conservative 13; Mismatches 10
                                                                                                                                                                                                                                                                    FILE REFERENCE: 3668-0005
CURRENT APPLICATION NUMBER: US/09/908,975
CURRENT FILING DATE: 2001-07-20
FRIOR APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2000-07-28
NUMBER OF SEQ ID NOS: 32337
SOFTWARE: Patentin version 3.0
SEQ ID NO 22269
LENGTH: 60
Sequence 22269, Application US/09908975
Publication No. US20030165843A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 23713, Application US/09908975 Publication No. US20030165843A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-908-975-23713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: SHOSHAN, APPLICANT: WASSERM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-908-975-23713/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-10-719-900-864120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-908-975-22269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                      APPLICANT: WASSERWAN, Alon
APPLICANT: WINTZ, E1
APPLICANT: THAT POPULATE A TRANSCRIPTOME
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE
TITLE OF INVENTION: THAT POPULATE A TRANSCRIPTOME
TITLE OF INVENTION NUMBER: US 60/2908, 975
CURRENT APPLICATION NUMBER: US 60/287, 724
PRIOR APPLICATION NUMBER: US 60/221, 607
SOFTWARE: PALENTIN VEXESION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence 3089, Application US/10349143
sequence 3089, Application US/10349143
spublication No. US20040005584A1
GENERAL INFORMATION:
APPLICANT: Cohen, Daniel
APPLICANT: Chumakov, Ilya
TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
FILE REFERENCE: GENSET. 02007-1
CURRENT FILING DATE: 2003-01-21
CURRENT FILING DATE: 1999-10-20
PRIOR PILING DATE: 1999-10-20
PRIOR PILING DATE: EARLIER FILING DATE: 1999-04-21
PRIOR PILING DATE: EARLIER FILING DATE: 1999-11-23
PRIOR FILING DATE: EARLIER FILING DATE: 1999-11-23
PRIOR FILING DATE: EARLIER FILING DATE: 1999-11-23
SPRIOR FILING DATE: EARLIER FILING DATE: 1999-04-21
NUMBER OF SEQ ID NOS: 11796
SEQ ID NO 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 42.1%; Score 24; DB 10; Length 60; Best Local Similarity 45.0%; Pred. No. 4.1e+03; Matches 18; Conservative 12; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40.7%; Score 23.2; DB 17; Length 38.6%; Pred, No. 7.4e+03; Live 14; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOCATION: 24; LOCATION: 24; COTHER INFORMATION: 99-22706-367; polymorphic base T or C US-10-349-143-3088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44 GGTCCTCATCATAACACTGCRAAGTGGGCATTCTTACTCTCATG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17 TCGCCTTCAACTCGGTCAACGTGGGGCCTCTGGCTTCGCA 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCGGCUUCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-349-143-3088/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-908-975-20125
                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 20125
LENGTH: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

RESULT 13

```
; Sequence 864120, Application US/10719900
; Publication No. US20050026164A1
; GENERAL INFORMATION:
; APPLICANT: Xue Mei Zhou
; TITLE OF INVENTION:
; TITLE OF INVENTION:
; CURRENT APPLICATION NUMBER: US/10/719,900
; CURRENT FILING DATE: 2003-11-20
; RIOR APPLICATION NUMBER: 60/427,808
; PRIOR FILING DATE: 2003-11-20
; NUMBER OF SEQ ID NOS: 982914
; SOFWWARE: Microarray Probe Sequence Listing Generator V 1.1
; SEQ ID NO 864120
; LENGTH: 25
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-719-900-864120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 39.3%; Score 22.4; DB 19; Length 25; Best Local Similarity 54.2%; Pred. No. 1.3e+04; Matches 13; Conservative 10; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GCAGTACCCACTGGGCATGCGGCT 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 GCGGUNNNNNUGGGCAUGCGGCU 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
```

ó

Gaps

; 0

Search completed: March 15, 2005, 21:09:20 Job time : 376.25 secs

us-09-69-667e-61.siz.rnpb

```
March 15, 2005, 15:20:59 ; Search time 2293 Seconds (without alignments) 946.212 Million cell updates/sec
                                                                                                                                                   US-09-699-667E-61
57
1 ggguccaccuccucgcggun......uucgcauggcuaagggaccc 57
                                                                                                                                                                                                                                                                                                  241816
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                  34239544 segs, 19032134700 residues
                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                            OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                    IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                          gb_est2:;
gb_est2::;
gb_est4::;
gb_est5::;
gb_gss6::;
gb_gss7::;
                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                            EST: *
                                                                                                                                                      Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pre
                                                                                           Run on:
```

	ત્તે	
ave a	core greater than or equal to the score of the result being printed	
to h	bein	ion.
red. No. is the number of results predicted by chance to have a	result	nd is derived by analysis of the total score distribution.
ģ	he	ğ
cted	of t	8COX(
predi	score	total
ults	the	the
res	유	oŧ
r of	equal	увів
admir	ö	anal
he n	than	à
ia t	cer	ived
No.	great	der:
red.	core	nd is

													`												
	Description	AI956143 wt35e01.x	AA878748 of85b02.s	BH638481 1008022G0	R10187 yf35d03.rl	CB058194 NISC jx01	AZ385410 1M0143E22	AA232965 zr69a04.8	AL944166 Arabidops	AI906698 QV-BT123-	CR360020 Arabidops	BI830168 603072810	H23825 yn71e03.81	CL234247 02S0288-0	CF316536 HD05-N1	AA261309 vb03f02.r	BH903452 SALK 1026	BH903454 SALK_1026	BH903457 SALK_1026	AI688077 wa83d03.x	AA770617 oe54d02.s	CR021509 Reverse s	AA762539 vv80e11.r	CG774833 1123021A1	AI937668 wp82b01.x
SUMMARIES	ΙD	AI956143	AA878748	BH638481	R10187	CB058194	AZ385410	AA232965	AL944166	AI906698	CR360020	BI830168	H23825	CL234247	CF316536	AA261309	BH903452	BH903454	BH903457	A1688077	AA770617	CR021509	AA762539	CG774833	AI937668
	. 80	٦	ч	æ	7	φ	œ	7	σ	۲4	σ	4	7	σ	7	Н	8	8	80	-	7	σ	-	σ	ч
	& Query Match Length DB	49	4	26	57	54	58	55	59	23	28	42	49	57	42	55	52	52	55	31	46	20	9	43	46
	Query Match	44.6	41.4	41.4	41.4	40.7	40.4	38.6	38.6	37.9	37.9	37.5	37.5	37.5	37.2	37.2	37.2	37.2	37.2	36.8	36.8	36.8	36.8	36.5	36.5
	Score	25.4	23.6	23.6	23.6	23.2	23	22	22	21.6	21.6	21.4	21.4	21.4	21.2	21.2	21.2	21.2	21.2	21	21	21	21	20.8	20.8
	Result No.	٦	7	m	4	ß	v	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Re	Ü	O		υ	υ		υ									U	υ	υ	U		υ	υ		U

0; Gaps

Query Match 44.6%; Score 25.4; DB 1; Length 49; Best Local Similarity 46.5%; Pred. No. 3.1e+04; Matches 20; Conservative 12; Mismatches 11; Indels

ORIGIN

AU102849 AU102849 AU102849 AU102849 BF58596 GC02095712 BI692727 G03343394 BI692727 G03343394 BI692172 G03343394 BI692172 G03343394 BI692172 G03343394 BI692172 G03343394 BI692172 G03343394 BI692172 G0342172 Reverse BI9020390 BI760995 G03048518 AZ655574 MO532012 BI517548 G03048518 AZ655574 MO532012 BI517548 G03041841 AX628670 AV104320 AV104348 AV104349 AV104349 AV104349 AV104349 AZ480319 AZA240319 AZA24	ALIGNMENTS  ALIGNMENTS  ALIGNMENTS  A1956143  W155601.X1 NCI CGAP Panl Homo sapiens cDNA clone IMAGE:2509464 3' similar to TR:061402 GRANULE CELL ANTISERUM POSITIVE 8 ;, A1956143.1 GI:5748453  A1956143.1 GI:5748453  A1956143.1 GI:5748453  A1956143.1 GI:5748453  BARNA saquence.  A1056143.1 GI:5748453  A1956143.1 GI:5748453  A1956143.1 GI:5748453  A1956143.1 GI:5748453  A1956143.1 GI:5748453  A1956143.1 GI:5748453  ANGRA Sapiens (human)  Homo sapiens (human)  Homo sapiens (human)  Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.  A1 (bases I to 49)  NGT-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.  NGT-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.  NGT-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.  Ongublished (1997)  Contect: Robert Strausberg, Ph.D.  Email: cgapbs r@mail.nih.gov  Life Technologies catalog #: 11548-013  DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be	image.html  r quality  1.  iens"  6"  carcinoma"  P Pan1"  P Pan1"  assi, Vector: pCMV-S  d unidirectionally.  1.72 kb. Life Tech
AU10284 BE58365 BE56707 CR22917 CR22917 BH80396 BH80396 AU1043 AU1043 AU1043 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048 AU1048	A A Paul Q614 Dhord Prima Prima Paul Litute Litute Litute Assiria	bbrp/image 'bbrp/image 'o coeral bo 'o coeral bo 'from Gibor 'incalifiera 'incal
1045004041111440000111	APP 1 4641 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	Doron
0 10 10 10 10 10 10 10 10 10 10 10 10 10	A1956143 wt35601.x1 NCI CGAP Pa similar to TR: 261402 Q mRNA sequence. A1956143.1 GI:5748453 EXT. Homo sapiens (human) (homo lases 1 to 49) NCI-CGAP http://www.ncNational Cancer Institutuor Gene Index Unpublished (1997) Contact: Robert Straus Email: cgapbs-r@mail.nife Technologies cata DNA Sequencing by: Warting Clone distribution: National Contacts (homo distribution: National Contacts)	www-bio.llnl.gov/bbrp/image/im www-bio.llnl.gov/bbrp/image/im Trace considered overall poor Seq primer: -400P from Gbco High quality sequence stop: 1. Location/Qualifiers 1. 49 /organism="Homo sapie: /mol_type="mknAm" /mol_type="mknAm" /mol_type="mknAm" /db_xref="taxon:960e" /clone="lumAGE:2509464" /tlsaue_type="adenoca" /tlsaue_type="adenoca" /tlsaue_type="adenoca" /clone="lumage:"DH108" /clone="Organ: pancrea" /note="Organ: pancrea" /note="Organ: pancrea" /note="Organ: pancrea"
$\dot{\mathbf{v}}.\mathbf{$	1143 101:11 as ar to 1 1143.1	nsid 1100 1111 11117 1117
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A1956143 wt35scl.xl NCI mimilar to TR: mimilar to TR: A1956143 Green A1956143 Green A1956143 Green A1956143 Green A1956143 Green Homo sapiens (Homo Green Ind (Homo Green	bio. Prim
	A1956 wt1356	11.00 11.00 11.00 11.00
		• • • • • • • • • • • • • • • • • • • •
00000000000000000000000000000000000000	RESULT 1 A1956143/c LOCUS DEFINITION ACCESSION VERYWORDS SOURCE ORGANISM THEFERENCE AUTHORS TITLE JOURNAL	FEATURES SOUFCE
0 0 00 0 0000 0 0	RESULT LOCUS DEFIN DEFIN DEFIN DEFIN VERSIG SOURCI ORGI AUTI TITTI	FEA

ò 셤

```
/ wol type="genomic DNA"
/wol type="genomic DNA"
/cultivar="mixed background W23/A188/B73"
/db xref="teaxon:457"
/fisure type="leaf"
/fisure type="leaf"
/dev_stage="adult"
/lab_nost="luba"|1008 - RescueMu Grid I"
/lab_nost="luba"|1008 - RescueMu (engineered from pBlueScript backbone); Site=1: BamHI; Site=2: Bg1II;
/sescueMu is a 4.9 kb, modified maize Mu transposon designed to allow plasmid rescue from total genomic DNA.
Mu elements insert preferentially into transcription units. For more information on RescueMu, go to the web site www.zmdb.iastate.edu and follow the links for NescueMu. Grid I was grown at Berkeley in 2001. DNA was extracted from leaf punches, double digested using BamHI and BgIII, and ligated to form circular plasmids. DH10B cells were transformed and then screened on LB plates with ampicillin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: est@watgon.wustl.edu
Insert Size: 2075
High quality sequence starts: 1 High quality sequence stops: 1
Source: IMAGE Consortium, LLNL This clone is available royalty-free through LLNL; contact the IMAGE Consortium (inf@aimage.llnl.gov)
for further information. Trace considered overall poor quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 06-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R10187
yf35d03.rl Soares fetal liver spleen 1NFLS Homo sapiens CDNA clone IMAGE:128837 5' similar to gb:X64044 SPLICING FACTOR U2AF 65 KD SUBDNIT (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. I (bases 1 to 57)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
                Сарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1995)
Contact: Wilson RK
Washington University School of Medicine
4444 Forest Parkway, Box 8501, St. Louis, MO 63108
Fax: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 41.4%; Score 23.6; DB 8; Length 56; Best Local Similarity 43.5%; Pred. No. 1.2e+05; Matches 20; Conservative 12; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 CCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
855 California Ave, Palo Alto, CA 94304,
                                                                                                                                                                                                          1. .56
/organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R10187
R10187.1 GI:762143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
R10187/c
                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                     AA878748 1NCI CGAP Lis Home appiens cDNA clone IMAGE:1437099 3. similar to SW:VNUA PRVKA P14885 PROBABLE NUCLEAR ANTIGEN. ;contains element TAR1 repetItive element ; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BH618481 55 bp DNA linear GSS 14-FEB-2002 1008022G07.2EL yl 1008 - RescueMu Grid I Zea mays genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maize genomic sequences found using engineered RescueMu transposon Unpublished (2001) Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="NCI_CGAP_Lis"
/note="Organ: liver; Vector: pCMV-SPORT4; Site_1: SalI;
Site_2: Not1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 0.8 kD."
                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 49)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                          3 GUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUG 45
                                                5 CCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUCGC 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail nih.gov
unknown library type
Trace considered overall poor quality
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40 CCTCCTCCCCGCGGGTGGTCTTTGGGATCCCGCCTGGC 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41.4%; Score 23.6; DB 1; 50.0%; Pred. No. 1.2e+05; ative 10; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="texon:9606"
/clone="IMAGE:1437099"
/issue_type="hepatic adenoma"
/lab_hogt="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Department of Biological Sciences Stanford University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BH638481.1 GI:18662595
                                                                                                                                                                                                                                                                                                    AA878748.1 GI:2987713
                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 56)
Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 50.0
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                            ношо варіепв
                                                                                                                                                                                                                                                                                AA878748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BH638481
                                                                                                                                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                       RESULT 2
AA878748/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
BH638481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
```

FEATURES

셤

COMMENT

ö

Gapa . 0 GSS 02-OCT-2000

```
/lab host="E. Coli strain XL10-Gold, T1-resistant, F-"
/lab host="E. Coli strain XL10-Gold, T1-resistant, F-"
/clone lib="Mouse 10kb plasmid UUGCIM library"
/note="vector: PWD42nv; Purified genomic DNA from M.
musculus C57BL/6J (male) was obtained from the Jackson
Laboratory Mouse DNA Resources/documents/documents/
(http://www.jax.org/resources/documents/documents/). The DNA
was hydrodynamically sheared by repeated passage through a
0.005 inch orifice at constant velocity. The sheared DNA
was blunt end-repaired with T4 DNA polymerase and T4
polynucleotide kinase. Adaptor oligonucleotides were
ligated to the blunt ends in high molar excess. The
adaptored DNA was purified and size-selected for a 9.5 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    His muscules (Craniata, Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Sciurognathi; Murinae; Musinae; Euteleostomi; Mammalia; Euteleostomi; Sincola (Craniata; Euteleostomi; Eutel
AZ385410
1M0143E22R Mouse 10kb plasmid UUGC1M library Mus musculus genomic clone UUGC1M0143E22 R, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC,
                                                                                                                                                                                                                                                                                                                                                         Query Match 40.7%; Score 23.2; DB 6; Length 54; Best Local Similarity 41.7%; Pred. No. 1.6e+05; Matches 15; Conservative 13; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 CCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUC 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43 CCTGTTCCTCTCTCGGTTATGGATGCGGGTGCGCCTTC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0143 row: E column: 22
Seq primer: CACACAGGAAACAGCTATGACC
Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="CS7BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
/clone="UUGC1M0143E22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 58.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AZ385410.1 GI:10499110
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="Male'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rm. 308, B:
84112, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
AZ385410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                             DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                  Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
CDNA Library Preparation:
CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL
DNA Sequencing Center (NISC)
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
info@mage.llnl.gov consortium/LLNL at:
Plate: LLAM11068 row: I column: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CECUSELY4 54 bp mRNA linear BST 17-JAN-2003
NISC_jx01e04.wl Soares NMBPA Mus musculus cDNA clone IMAGE:5023950
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 54)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="Organ: brain, Vector: pT7T3D-PacI; Site_1: NotI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
41.4%; Score 23.6; DB 7; Length 57;
Best Local Similarity 45.7%; Pred. No. 1.2e+05;
Matches 21; Conservative 11; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUCGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="pituitary gland"
/dev stage="adult"
/lab_host="BH10B (phage-resistant)"
/clone_lib="Soares NMBPA"
      Std Error: 0.00
                                                                                                                                                        /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="GDB.480998"
/db_xref="taxon:9606"
/clone="IMAGE:128837"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:5023950"
   Insert Length: 2075 Std Erro
Seg primer: M13RP1
High quality sequence stop: 1.
                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seg primer: T7 primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CB058194.1 GI:27796481
                                                                                                                                                                                                                                                                                                                                  /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
CB058194/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
```

8

Ē

ORIGIN

g

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                            AL944166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14682050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4756321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                           RESULT 8
AL944166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                      셤
                                                                                                                                                                                             8
10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pWDA2 (gi|4732114|gb|AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coli X110-Gold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_libe="Goarces NhHMPL S1"
/clone_libe="Goarces NhHMPL S1"
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
(Pharmacia) with a modified polylinker; Site 1: Not I;
Site 2: Eco RI; Equal amounts of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
were made in vitro. Pollowing HAP purification, this DNA
was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified cDNAs from pools of
5,000 clones made from the same 3 libraries. The pools
                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA212965

zr69a04.sl Soares NhHMPu S1 Homo sapiens cDNA clone IMAGE:668622 3' similar to SW:UCRX BOVIN P00130 UBIQUINOL-CYTOCHROME C REDUCTASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
I (Dases 1 to 55)
Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J.,
Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B.,
White,Y., Wylie,T., Waterston,R. and Wilson,R.
Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="Pooled human melanocyte, fetal heart, and
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
This clone is available royalty-free through LLNL; contact the
TMAGE Consortium (info@image.llnl.gov) for further information.

Trace considered overall poor quality
Possible reversed clone: similarity on wrong strand
Insert Length: 560 Std Brror: 0.00
Seq primer: -41ml3 fwd. ET from Amersham
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                            57
                                                                                                                                                                                                                                                                                                                                                                                     Length 58;
                                                                                                                                                                                                                                                                                                                                                          11 CCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                             15; Indels
                                                                                                                                                                                                                                                               Score 23; DB 8; I
Pred. No. 1.8e+05;
                                                                                                                                                                                                                                                                                                             9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="GDB:5562589"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
/clone="IMAGE:668622"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /lab host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA232965.1 GI:1856126
                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 48.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA232965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA232965/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
```

```
Rosso,M.G., Li,Y., Strizhov,N. and Weisshaar,B.
Rosso,M.G., Li,Y., Strizhov,N. and Weisshaar,B.

Direct Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer
This sequence has been recovered from the left border of the T-DNA.
It indicates an insertion within the locus defined by BAC clone
It indicates an insertion within the locus defined by BAC clone
are described in References 1-3. The sequences are generated at the
MHI for plant Breeding Research in the context of the Gaplen-Kat
project GABI-Kat is part of the Garman Plant Genomics program
designated 'GABI'. Information on line availability can be found
at: http://www.mpiz.kceln.mpg.de/GABI-Kat/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL944166 59 bp DNA linear GSS 01-APR-2004
Arabidopsis thaliana T-DNA flanking sequence GK-280A08-015200,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:3702"
/clone="GK-280A08-015200"
/clone=lb="Arabidopsis thaliana T-DNA insertion lines"
/ccctype="Col-0"
/note="PCR was performed on DNA from Arabidopsis thaliana
plants (T1) which were transformed with the T-DNA from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B.
SABI-Kat SimpleSearch: a flanking sequence tag (FST) database for
the identification of T-DNA insertion mutants in Arabidopsis
thaliana
                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                     3 guccaccuccucacagunnnnnuagagcaugcagcuucacaugagunaaggaacc 56
                                                                                                                                                                                                                                                                                                                                                   ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosso,M.G., Li,Y., Strizhov,N., Reiss,B., Dekker,K. and
Weisshaar,B.
consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
                                                                                                                                                38.6%; Score 22; DB 1; Length 55; 44.4%; Pred. No. 3.7e+05;
                                                                                                                                                                                                                      20; Indels

    .59
    organism="Arabidopsis thaliana"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bioinformatics 19 (11), 1441-1442 (2003) 22755829
                                                                                                                                                                                                                      10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic_DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL944166.1 GI:24400788
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana
                                                                                                                                                                                                                         24; Conservative
```

54

CCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGA

11

Wed

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                     CR360020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                               g
       8
vector pAC161 (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA tragment(e) resulting from the PCK were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed."
                                                                                                                                                                                                                                                                                                                                                                                                                                      A1906698 53 bp mRNA linear EST 30-MAR-2000 QV-BT123-040399-068_1 BT123 Homo sapiens CDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: +55-11-2704922
Fax: +55-11-2707001
Fax: +55-11-2707001
Fax: +55-11-2707001

Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/seq/gethtml.pl?tl=QV&t2=QV-BT123-068_1.html&t3=Q40399&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev stage="Adult"
/clone lib="BT123"
/note="Organ: breast; Vector: puc18; Site_1: Smal; Site_2:
Smal; A mini-library was made by cloning products derived
from ORESTES PCR (U.S. Letters Patent application No.
196,716 - Ludwig Institute for Cancer Research) profiles
into the pUC 18 vector. Reverse transcription of tissue
mRNA and CDNA amplification were performed under low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 53)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                       57
                                                                                                                                                                                                                                                                                             Length 59;
                                                                                                                                                                                                                        15; Indels
                                                                                                                                                                                                                                                                  CUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                      38.6%; Score 22; DB 9; I
43.5%; Pred. No. 3.8e+05;
                                                                                                                                                                                                                   11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stringency conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer: puc 18 forward.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AI906698.1 GI:6497106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brazil
                                                                                                                                                                                                                     20;
                                                                                                                                                                         Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
PUBMED
                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                AI906698
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                 윱
```

```
Direct Submission

L. Submitter (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer

Direct Submission

Submitter (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer

Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany
This sequence has been recovered from the left border of the T-DNA.

It indicates an insertion within the locus defined by BAC clone
T28J14. Details on the protocols used for generation of the
sequence are described in References 1.3. The sequences are
generated at the MPI for Plant Breeding Research in the context of
the GABI-Kat project. GABI-Kat is part of the German Plant Genomics
program designated 'GABI'. Information on line availability can be
found at: http://www.mpiz-veeln.mpg.de/GABI-Kat/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db xref="texcon:3702"
/clone="GK-807F01-025203"
/clone="GK-807F01-025203"
/clone lib="Arabidopsis thaliana T-DNA insertion lines"
/ecotype="Col-0"
/note="PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from vector pAC106 (GenBank accession number: AJ537513). The lines contain one or more T-DNA insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion.
                                                                                                                                                                                                      CR360020 58 bp DNA linear GSS 05-APR-2004
Arabidopsis thaliana T-DNA flanking sequence GK-807F01-025203,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strizhov,N., Li,Y., Rosso,M.G., Viehoever,P., Dekker,K.A. and
Weisshaar,B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rosso, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.9%; Score 21.6; DB 9; Length 58;
                     46
3 CCTGGCGGTCGGGACTGGGAAAAACACCTGCGGGCCGGGTCTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA derived sequences were removed."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .58
/organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bioinformatics 19 (11), 1441-1442 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                           genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                CR360020.1 GI:45542942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 58)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22755829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14756321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                  RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
```

.

ö

Gaps

. 0

37.9%; Score 21.6; DB 1; Length 53; 43.2%; Pred. No. 5e+05; ive 11; Mismatches 14; Indel8

Query Match
Best Local Similarity 43.2
Matches 19; Conservative

DEFINITION

ACCESSION

VERSION KEYWORDS

RESULT 11 BI830168

ઠે 요 ORGANISM

SOURCE

REFERENCE AUTHORS TITLE JOURNAL COMMENT

```
//ac.nose="Nutlo" (amptorinin restriction")
//clone lib="Soares adult brain N2b5BB55"
//note="Organ: brain; Vector: pT713D (Pharmacia) with a modified polylinker; Site 1: Site 2: Boo Ri; laterand cDNA was primed with a Not I; Site 2: Boo Ri; lateranded cDNA was size selected, ligated to Boron adapters (Pharmacia), digested with Not I and cloned into the Not I and Eoc RI aites of a modified pT7T3 vector (Pharmacia). Library went through one round of normalization to a Cot = 53. Library constructed by Bento Soares and M. Fatima Bonald. The adult brain RNA was provided by Dr. Donald H. Gilden. Tissue was acquired 17-18 hours after death which occurred in consequence of a ruptured aortic aneurysm. RNA was prepared from a pool of tissues representing the following areas of the brain: frontal, parietal, temporal and occipital cortex from the left and right hemispheres, subcortical white matter, basal ganglia, thalamus, cerebellum, midbrain, pons and medulla."
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS 08-JAN-2004
                                        Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Eukaryota, Butheria, Primates, Catarrhini, Hominidae, Homo.

(bases 1 to 49)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37.5%; Score 21.4; DB 7; Length 49; 52.2%; Pred. No. 5.7e+05; ive 10; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="55-year old"
/lab_host="DH10B (ampicillin resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol_type="mRNA"
/mb_xref="GDB:3815919"
/db_xref="taxon:9606"
/clone="IMAGE:173884"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GUCCACCUCGCGGUNNNNN 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 GTCCACCTCCTTGCGGTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'sex="Male"
                       sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 52.2
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . .49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CL234247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                              ORGANISM
                                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
CL234247
LOCUS
                                                                                                                        REFERENCE
                                                                                                                                                 AUTHORS
CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                BI830168 42 bp mRNA linear EST 04-OCT-2001
603072810F1 NIH_MGC_119 Homo sapiens CDNA clone IMAGE:5164731 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cloning). Average insert size 1.3 kb, insert size range 0.9.3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 06-JUL-1995
                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: brain; Vector: pCWV-SPORT6; Site 1: Not1; Site 2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon
                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yn71e03.81 Soares adult brain N2bHB5SY Homo sapiens CDNA clone IMAGE:173884 3' similar to SP:839059 839059 BRGI PROTEIN -; conteains TAR1 repetitive element ;, mRNA sequence. H23825.1 GI:892520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 37.5%; Score 21.4; DB 4; Length 42;
1 Similarity 46.2%; Pred. No. 5.6e+05;
18; Conservative 10; Mismatches 11; Indels
                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 GGTACGCCCCGGGATTACGGGATCGCACGGATCATGGCC 42
  44.4%; Pred. No. 5e+05;
ive 11; Mismatches 9;
                                                                                                      23 CCACCTGCCTTCGTTCCCCTTTGGGAATGGGGGTGC 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17 GGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGAC
                                                                       5 CCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUC 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
mol_type="mRNA"
db_xref="taxon:9606"
clone="IMAGE:5164731"
/tissue_type="medulla"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="NIH_MGC_119"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence start: 4
High quality sequence stop: 42.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                               BI830168.1 GI:15941718
                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
Best Local Similarity 44.4%
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 42)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inpublished (1999)
                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                          31830168
```

source

FEATURES

DEFINITION

RESULT 12

Matches

ð 셤

ORIGIN

ACCESSION VERSION

```
/clone="IMAGE:747867"
Yongin, Kyeonggi, Korea
Tel: 82 31 330 6193
Fax: 82 31 321 6355
Email: bhuahm@ggio.com, bhua
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA261309.1 GI:1895853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 line."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGI:456851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA261309
                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
AA261309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Zea mays"
/mol_type="genomic DNA"
/strain="W22 (ACF, bz1-m9)"
/strain="W22 (ACF, bz1-m9)"
/strain="W22 (ACF, bz1-m9)"
/cultiva="UniformWu"
/db xref="taxon:4577"
/clone="U520288-04D1-A12"
/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 15-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Sukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzae; Oryza;
(japonica) (japoni
                                                                                                                                                                                                                                                                                                       Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HD--05-N19.bl OsHDAC1-overexpressing transgenic rice plasmid cDNA library (HD) Oryza sativa (japonica cultivar-group) cDNA clone HD--05-N19, mRNA sequence. CF316536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Nahm B.H. Genetics Institute, GreenGene Biotech Inc.; Division of Bioscience and Bioinformatics, MyongJi University
0280288-04D1-A12 UniformMu MuTAIL Library Zea mays genomic clone 0280288-04D1-A12, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: drm@ufl.edu
Sequence flanking probable Mu insertion site in UniformMu line:
0280288-04, Primer set: D
Class: transposon insertion site.
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 57)
Latshaw,S., Tan,B-.C., Settles,A.M. and McCarty,D.R.
Sequence tagged transposon insertions from the UniformMu maize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37.5%; Score 21.4; DB 9; Length 57; 51.6%; Pred. No. 5.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Depublished (2003)
Contact: Donald R. McCarty
Plant Molecular and Cellular Biology Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           University of Florida
PO 110690 Gainesville, FL 32611-0690, USA
Tel: 352-392-1928 x322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11 CCAGCAGCTTGCGGAGTGGACTGCGCATGCG 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                      CL234247.1 GI:40778227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CF316536.1 GI:33688297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              population
                                                                                             CL234247
                                                                                                                                                                                                                      Zea mays
                                                                                                                                                                                                                                                                       Zea mayв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CF316536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
DEFINITION
                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
CF316536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
```

ò 요

```
db_xref="taxon:39947"
| Colon="MD-05-N19" |
| Aclone="MD-05-N19" |
| Adev_stage="proliferated callus on 2N6 media for 2 weeks" |
| Adev_stage="proliferated callus on 2N6 media for 2 weeks" |
| Alb host="B.coli DH10B" |
| Alb host="B.coli DH10B" |
| Alb host="OstDAC1-overexpressing transgenic rice plasmid cDNA library (HD)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vb03f02.rl Scares mouse NML Mus musculus cDNA clone IMAGB:747867 5' similar to SW:GAMT_RAT P10868 GUANIDINOACETATE N-METHYLTRANSFERASE 1, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (Bases 1 to 55)

Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theislang, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and Waterston, R.

The MashU-HHMI Mouse EST Project
Unpublished (1996)
WashU-HHMI Mouse EST Project
WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pcR4-TOPO; Site_1: EcoRI; Callus was treated with ABA(10um) for 1hr. Oligo-capped mRNA was reverse transcribed and then used for PCR. mRNA was derived from rice Histone Deacetylase overexpression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                    /organism="Oryza sativa (japonica cultivar-group)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.2%; Score 21.2; DB 7; Length 42; 38.1%; Pred. No. 6.5e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trace considered overall poor quality
Sossible reversed clone: similarity on wrong strand
Seg primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 1.
bhnahm@bio.myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 ACCUCCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCU 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 AACTCCACGAGTTGAAGCCTGTCCTTGCCACTGCAAATGCCT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db xref="taxon:10090"
                                                                                                                                    /mol_type="mRNA"
/cultivar="Nackdong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
```

ö Gaps ; Query Match

37.2%; Score 21.2; DB 1; Length 55;
Best Local Similarity 47.6%; Pred. No. 6.6e+05;
Matches 20; Conservative 9; Mismatches 13; Indels

ò g Search completed: March 15, 2005, 20:38:02 Job time: 2306 secs

Scoring table:

Searched:

08 08

Minimum | Maximum |

Database

Perfect score:

Sequence:

OM nucleic

Run on:

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 06-SEP-2000
                      AR021007 Sequence
AR041047 Sequence
AR041042 Sequence
AR062337 Sequence
AR1681396 Sequence
AR1881896 Sequence
AR18819 Sequence
AR18819 Sequence
CQ759677 Sequence
141388 Sequence 16
AR123011 Sequence
14138 Sequence 11
14138 Sequence 11
14138 Sequence 14
14138 Sequence 14
14138 Sequence AR1300 Sequence
AR243100 Sequence
AR342596 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 44 04-NOV-1999;
ANANVORANICH SIRINGAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGCCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 57; DB 6; Length 57 Best Local Similarity 71.9%; Pred. No. 2.3e-05; Matches 41; Conservative 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ananyoranich, S., Lafontaine, D. and Perreault, J.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                        RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57 bp
Sequence 45 from Patent WO9955856.
AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                      AX012282 57 bp
Sequence 44 from Patent WO9955856
                                                                                                                                                                                                                                                                            AX174838
AX174839
AX363756
                      AR021007
AR021047
AR043422
AR043462
AR062337
AR062377
AR183796
AR183836
AR368179
AR368179
                                                                                                                                                               141388
AR123021
141385
1413386
141378
BD226817
AR243300
AR342596
AR342596
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX012282.1 GI:9998343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
213025
215914
                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 1
AX012282
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                            O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX012282 Sequence
AX012283 Sequence
AX012286 Sequence
AX012287 Sequence
AX012289 Sequence
AX012299 Sequence
AX012290 Sequence
AX012291 Sequence
AX0084129 Home Sapi
AC008429 Home Sapi
AC008429 Home Sapi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACO84828 Mus muscu
AL589650 Mouse DNA
AC117632 Mus muscu
                                                                                  March 15, 2005, 06:19:02; Search time 1119.5 Seconds (without alignments) 2467.126 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                               1 ggguccaccuccucgcggun.....uucgcauggcuaagggaccc
                                                                                                                                                                                                                                                       9416466
             GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                           4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                            nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX012286
AX012287
AX012288
AX012289
AX012284
AX012291
HSA287B20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141390
AC034123
AL929212
AC008429
AC119266
AC084828
AL589650
                                                                                                                                                                                                    Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                            seq length: 0
seq length: 200000000
                                                                                                                                 US-09-699-667E-61
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BB
                                                                                                                                                                                                                                                                                                                                                                               90 ba: *
90 htg *
90 om: *
90 om: *
90 om: *
90 om: *
90 pi: *
90 pi: *
90 ets: *
90 ets: *
90 om: *
                                                                                                                                                                                        IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0

83.2

64.3

56.5

168545

55.8

61.

54.7

21.9811

54.7

21.9423

53.7

174035

53.7

196238

53.7

196238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57
57
57
57
57
37
168545
                                                                                                                                                                                                                                                                                                                                                                    GenEmb1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10:
```

ö

57

Score

Result õ

Length 57;

Indels

PAT 06-SEP-2000

linear

ઠે 유

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 955856-A 49 04-N0V-1999;

ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="caxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 100.0%; Score 57; DB 6; Similarity 71.9%; Pred. No. 2.3e-05; 41; Conservative 16; Mismatches 0
                                  /organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_txref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                           ch 100.0%; Score 57; DB 6; Similarity 71.9%; Pred. No. 2.3e-05; 41; Conservative 16; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                              Sequence 49 from Patent WO9955856.
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 50 from Patent WO9955856.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                      AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
             .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 41; Conserv
                                                                                                                                                                  Best Local Similarity
                                                                                                                                                 Query Match
                     source
                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                RESULT 5
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958B56-A 47 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ananyoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Batent: WO 995586-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 995856-A 45 04-NOV-1999;

ANANVORANICH SIRINARR (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERREQUEE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNUGGCCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                         1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGGCTTCGCCTTCGCATGCGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 57; DB 6; Length 57; Best Local Similarity 71.9%; Pred. No. 2.3e-05; Matches 41; Conservative 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                           100.0%; Score 57; DB 6; Length 57; 71.9%; Pred. No. 2.3e-05; tive 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                               1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
other sequences; artificial sequences.
other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 48 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX012285 57 bp
Sequence 47 from Patent W09958856.
AX012285 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                  41; Conservative
                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                  Matches
                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
AX012285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
AX012286
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
```

ö

0; Gaps

Length 57;

PAT 06-SEP-2000

linear

ð 쉽

tches

DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

AX012289 LOCUS

RESULT 7

셤

TITLE JOURNAL

FEATURES

ORIGIN

AUTHORS REFERENCE

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                               Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 46 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

10.57

10.57

10.57

Anganism="synthetic construct"

//mol_type="unassigned RNa"

//db_xrefe="taxon:32690"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSA287B20 168545 bp DNA linear PRI 11-MAR-2001
Human DNA sequence from clone RPI1-287B20 on chromosome 20 Contains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 53 04-NOV-1999;
PARNORANICH SIRINART (A3); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GEGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
1 GGGTCCACCTCCTCGCGGTCCGATCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 64.9%; Score 37; DB 6; Length 37; Best Local Similarity 67.6%; Pred. No. 32; Matches 25; Conservative 12; Mismatches 0; Indels
                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGTCCACCTCCTCGCGGTCCGACCTGGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. 37
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCCAUGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="synthetic nucleic acid"
                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83.2%; Score 47.4; DB 64.9%; Pred. No. 0.02; ive 14; Mismatches
                                                                                                                                                                                                               synthetic construct other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other sequences; artificial sequences.
                                                                                        Sequence 46 from Patent WO9955856.
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37 bp
Sequence 53 from Patent WO9955856.
AX012291
                                                                                                                                                      AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012291.1 GI:9998352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 64.9% Matches 37; Conservative
                                                                                                                                                                                               synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSA287B20/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                 ORGANISM
                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
AX012291
                                                        RESULT 9
AX012284
LOCUS
                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                            ö
                                                                                                                                                                                                                                   PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 52 04-NOV-1999;
ANANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERROXE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                        Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: W0 995886-A 51 04-NOV-1999;
ANANVORANICH SIRINART (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGTCCACCTCCTCGCGGTCCGAGCTGGGCATGCGGCTTGGCCTAAGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGUCCACCUCCCCCCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ch 100.0%; Score 57; DB 6; Length 57; 1 Similarity 71.9%; Pred. No. 2.3e-05; 41; Conservative 16; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 57; DB 6; Length 57; 71.9%; Pred. No. 2.3e-05; Live 16; Mismatches 0; Indels
                      Length 57;
                                                                                                                                                                                                                                   linear
                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/noTe="synthetic nucleic acid"
                      Score 57; DB 6;
Pred. No. 2.3e-05;
                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                                      other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences
                                                            16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 52 from Patent WO9955856.
AX012290
AX012290.1 GI:9998351
                                                                                                                                                                                                                               Sequence 51 from Patent WO9955856.
AX012289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                    ch 100.0%;
1 Similarity 71.9%; 741; Conservative 16
                                                                                                                                                                                                                                                                                             AX012289.1 GI:9998350
                                                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 41; Conserv
                                        Local Similarity
                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
```

DEFINITION ACCESSION VERSION KEYWORDS SOURCE

RESULT 8 AX012290

ò 셤 LOCUS

ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL

FEATURES

Matches

ORIGIN

ö

```
, 2000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STWERLOMPETSON RELIGIOUS PREMARIANT PROPERTY STREET PROPERTY INTIADLEST DEPORTAL PROPERTY INTIADLEST GHYPLEGGRAILHSVERSPERSEL TRYBUTH CONCESSITY TO GHYPIT INTIADLEST GHYPLEGGRAILHSVERSPERSEL PROPERTY INTIADLEST GHYPLEGGRAILHSVERSPERSEL PROPERTY P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="continued from dJ1049G11 (AL078634)
match: CDNAs: Em:AK002211 Em:AB032400 Em:AF041106
match: CDNAs: Em:AK002201 Em:AB033098
match: EST9: Em:T90823 Em:BB467241 Em:BE349987 Em:BE219600
Em:R05337 Em:T85728 Em:AW753998 Em:AW658646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /-dvidence=not_experimental
/product="ba287B20.1.1 (KIAA1272 similar to rat tulip
/product="ba287B20.1.1 (KIAA1272 similar to rat tulip
/protein id="da727349.1"
/db_xref="G1:12583643"
/db_xref="G1:12583643"
/db_xref="UniProt/TrEMBL:09B0T6"
/translation="DILNTIRHCPRFFSLGFPGFSMLVGDFITAAARVLSTDILTA
PRSBANTVLGSLVGFPNTYOBIPLLOSVPEWNBAITGTEDVGHYLINTLLKNATEEPN
EYARCIAVCSLGVWICEELAQCTSHPQVKEAINVIGYTLKFPNKIVAQVACDVLQLLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .7228. .17518
'note="L1M4 repeat: matches 5031. .5329 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="FLAM A repeat: matches 20. .135 of consensus" 5330. .153\overline{6}9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="MLTIC repeat: matches 299. .466 of consensus"
[6740. .16951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="MLTIC repeat: matches 17. .237 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="AluJo repeat: matches 1. .298 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="MIR repeat: matches 70. .213 of consensus"
15634. .15793
/note="MIR repeat: matches 81. .175 of consensus"
16054. .16481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                match: GSS: Em:AQ312069"
12766. .12980
/note="MER3 repeat: matches 4. .209 of consensus"
14926. .15041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ="L1MD2 repeat: matches 5788. .5932 of .18340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .148 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                match: proteins: Tr:055008 Tr:Q9Y408" /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="MIR repeat: matches 106.
                                                                                        /note="match: GSS: Em:AQ525450"
Complement (9548. .10038)
/note="match: GSS: Em:AQ772919"
10005. .10404
                                                                                                                                                                                                                                                                              'note="match: GSS: Em:AQ409384"
:omplement(11328. .146133)
gene="bA287B20.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="match: GSS: Em:B47002"
6546. .16696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MTFEDFAAQVFSPSPSYSLSGT"
11547. .12050
/note="match: STS: Em:G55717
             match: GSS: Em:AQ345124"
                                                                                                                                                                                                                                                                                                                        complement (11328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17900. .18040
'note="L1MD2 r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5335. .15474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Em: R05338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                 misc_feature
                                                                                                                                                misc_feature
                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submitted (08-MAR-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requestes: clonerequest@sanger.ac.uk

On Jan 27, 2001 this sequence version replaced gi:8218066.

During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em: EMBL; Sw., SWISSPROT; Tr., TREMBL; Wp., WORMPEP; Information on the WORMPEP database can be found at the properties of pacterial clone contigs of human chromsome 20, constructed by the Sanger Centre Chromosome 20 mapping Group. Further information can be found at thromosome 20, constructed by the Sanger Centre Chromosome 20 http://www.aanger.ac.uk/RGP/Chr20

RRP11-287820 is from the library RPC1-11.1 constructed by the group of bieter de Jong. Por futther details see http://www.chori.org/bacpac/home.htm

VECTOR: pBACe3.6 from the library RPC1-11.1 constructed by the group of bieter de Jong. Por futther details see http://www.chori.org/bacpac/home.htm

VECTOR: pBACe3.6 from the library RPC1-11.1 constructed by the group of bieter de Jong. Por futther details see http://www.chori.org/bacpac/home.htm

VECTOR: pBACe3.6 from the library RPC1-11.1 constructed by the group of bieter de Jong. Por futther details see http://www.chori.org/bacpac/home.htm

VECTOR: pBACe3.6 from the library RPC1-11.1 constructed by the group sections only once, except for a lo0 base overlap.

The true left end of clone RP11-287820 is at 1 in this sequence. The true right end of clone RP11-470C13 is at 111612 in this sequence. The true right end of clone RP11-470C13 is at 111612 in this sequence. The true right end of clone RP11-
                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 168545)
Griffiths,C.
of gene KIAA1272 for a protein similar to rat Tulip 2, EST8, and GSSs, complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30. .496
/note="L1MB8 repeat: matches 5689. .6167 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /notes="12 repeat: matches 2101. .2670 of consensus" 5422. .5607
/notes="MER5B repeat: matches 1. .178 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .275 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (358. .678)
/note="match: STS: Em:G25753 Em:G27399"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5931. .6206
/note="AluJb repeat: matches 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23. .649
/note="match: GSS: Em:AQ542006"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (7762, .8243)
/note="match: GSS: Em:Az260027"
9279, .9897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9279. .9897
/note="match: STS: Em:G57973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .organism="Homo sapiens"
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="RP11-287B20"
/clone_lib="RPCI-11.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic_DN/
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chromosome="20"
                                                                                                 AL121896
AL121896.11 GI:12583641
HTG; KIAA1272; Tulip.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2049.
                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  digest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
```

```
source
                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
JOURNAL
AUTHORS
                                                                                                                                                                                                                                                                                      RESULT 13
AC034123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                            ORIGIN
                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 13-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="Charlie4a repeat: matches 30. .501 of consensus"
                                                           11618. .1881

Anote="AluJo repeat: matches 1. .292 of consensus"

22065. .22161

23992. .24102

Anote="LIPAA repeat: matches 6032. .6142 of consensus"
                            21001. .21605
/note="LiMB7 repeat: matches 5577. .6169 of consensus"
                                                                                                                                                                                                                                                                      note="MIR repeat: matches 23. .147 of consensus" 0933. .31124 note="L1MA7 repeat: matches 6075. .6273 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43751. .43776
Anote="13 copies 2 mer ac 92% conserved"
43783. .43862
Anote="LiME3A repeat: matches 6030...6117 of consensu:
43944. .44059
Anote="LiME repeat: matches 5469. .5587 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2962 CCACAGCCTCCAGGTAACATCTGGGCATGCAGCTTCGTGAGGCTGGGCGCTCC 2910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="MER44B repeat: matches 1. .533 of consensus"
5723. .45772
                                                                                                                                                                                                                                                                                                                                                                                                                                    .2661 of consensus"
                                                                                                                                                      8519. .38813
note="AluJb repeat: matches 1. .295 of consensus"
                                                                                                                                                                                                                                                                                                                                                                      .237 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                     .288 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .175 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="MADE1 repeat: matches 31. .80 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note="MIR repeat: matches 148. .207 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="MIR repeat: matches 1. .174 of consensus"
1535. .41666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 168545;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="8 copies 4 mer acac 87% conserved"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56.5%; Score 32.2; DB 9; 50.9%; Pred. No. 2.8e+02; tive 13; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                 note="MIR repeat: matches 100.
                                                                                                                                                                                                                                                                                                                                                                                                   note="AluJb repeat: matches 1.
                                                                                                                                                                                                                                                                                                                                                                                                                  6573. .37174
hote="LZ repeat: matches 1921.
7353. .37774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="MER5B repeat: matches 1.
                note="AluSp repeat: matches 1.
                                                                                                                                                                                                                                                                                                                                      note="match: GSS: Em:AQ176627"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="match: GSS: Em:AQ626507"
13258. .43426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 bp C
Sequence 18 from patent US 5625047.
141390
                                                                                                                                                                                                                                                                                                                      2304. .32730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1378. .41532
                                                                                                                                                                                                                                                       .29412
                                                                                                                                                                                                                                                                                                                                                                                    3955. .34242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .45909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14070. .44541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:2081980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
Unclassified.
1 (bases 1 to 61)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141390.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
 repeat_region
                                 repeat_region
                                                                repeat_region
                                                                                               repeat_region
                                                                                                                           repeat_region
                                                                                                                                                           repeat_region
                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
141390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
```

유

```
Dipublished

Signature of the control of the contro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC034123 219811 bp DNA linear HTG 26-MAY-2000
Mus musculus clone RP23-201E3, WORKING DRAFT SEQUENCE, 41 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. I (bases I to 21981)
Birren, B., Linton, L., Nusbaum, C. and Lander, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                            Length 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center clone name: 201 E 3
------ Summary Statistice
Sequencing vector: M13; M77815; 100% of reads
Been,M.D., Rosenstein,S.P. and Perrotta,A.T.
Enzymatic RNA molecules
Patent: US 5625047-A 18 29-APR-1997;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                        55.8%; Score 31.8; DB 6; 58.5%; Pred. No. 1.1e+03; iive 16; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center project name: L8067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC034123.3 GI:8077098
HTG; HTGS PHASE1; HTGS DRAFT.
MUS mUSCULUS (hOUSE mOUSE)
MUS mUSCULUS
                                                                                                                                                                                                              /organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                          31, Conservative
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
```

```
contig of 8063 bp in length

gap of 100 bp

contig of 8895 bp in length

gap of 100 bp

contig of 8895 bp in length

contig of 10756 bp in length

contig of 10756 bp in length

contig of 10756 bp in length

contig of 12963 bp in length

gap of 100 bp

contig of 12963 bp in length

gap of 100 bp

contig of 1782 bp in length

contig of 1782 bp in length

contig of 16181 bp in length

gap of 100 bp

contig of 16181 bp in length

gap of 100 bp

contig of 16181 bp in length

gap of 100 bp

contig of 17469 bp in length

gap of 100 bp
                                                                            gan of 100 bp
contig of 6351 bp in length
gap of 100 bp
contig of 7319 bp in length
gap of 100 bp
contig of 8063 bp in length
                         gap of 100 bp contig of 6660 bp in length gap of 100 bp
                     bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="RP23-201E3"
/clone lib="RPCI-23 Female Mouse BAC"
1. .1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /noce="assembly_fragment"
13816. 16140
/noce="assembly_fragment"
16241. 18860
/noce="assembly_fragment"
18961. 21162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2629. .3823 /note="assembly_fragment"
3924. .5052 /note="assembly_fragment"
5153. .6323 /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6424. .6930
/note="assembly_fragment
clone_and:T7
vectoT_side:right"
7031. .8598
/note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_fragment"
28632. .32027
3004ce="assembly_fragment"
32128. .35156
/note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21263. .23366
/note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1239. .2528
/note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8699. .10151
/note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                     contig
gap of
                                                                            89868:
96219:
96319:
103638:
                                                                                                                                                                                                                                                                                                         141448:
141548:
154511:
154611:
                                                                                                                                                                                                                                                                                                                                                                                                             168679:
185961:
186061:
202242:
202342:
219811:
                                                                                                                                                                                                                                                                     130592:
                                                                                                                                                                                                         111901:
                                                                                                                                                                                                                                                                                                                                                                                            168579:
                                                                                                                                                                 103738:
                                                                                                                                                                                                                                 121597:
                                                                                                                                                                                                                                                  121697:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     185962
186062
202243
202343
                                                                                                                                                                                                                                                                                                                                  141449
141549
                                                                                                                                                                                                                                                                                                                                                                                                                 168580
                     76519
83009
83109
89769
89869
96220
96320
103639
1111802
                                                                                                                                                                                                                                                                       121698
                                                                                                                                                                                                                                                                                                                                                                           54512
                                                                                                                                                                                                                                                                                                                                                                                              54612
                                                                                                                                                                                                                                                                                                             130693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                               NOTE: This is a 'working draft' sequence. It currently consists of 41 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731 Consensus quality: 200542 bases at least Q40 Consensus quality: 209380 bases at least Q40 Consensus quality: 212903 bases at least Q20 Insert size: 250000; agarose-fp Insert size: 215811; sum-of-contigs Quality coverage: 3.4 in Q20 bases; sum-of-contigs Quality coverage: 3.9 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                    contig of 1138 bp in length gap of 100 bp contig of 1290 bp in length gap of 100 bp contig of 1195 bp in length gap of 100 bp contig of 1195 bp in length gap of 100 bp contig of 1171 bp in length gap of 100 bp contig of 156 bp in length gap of 100 bp contig of 156 bp in length gap of 100 bp contig of 156 bp in length gap of 100 bp contig of 156 bp in length gap of 100 bp contig of 2325 bp in length gap of 100 bp contig of 2325 bp in length gap of 100 bp contig of 2325 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 2202 bp in length gap of 100 bp contig of 200 bp in length gap of 100 bp contig of 200 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  f 100 bp
g of 3029 bp in length
f 100 bp
g of 3578 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 f 100 bp
g of 2325 bp in length
f 100 bp
g of 2620 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
9 of 2104 bp in length
100 bp
9 of 2378 bp in length
100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
of 3870 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
of 3396 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 bp
of 3620 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
of 4307 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
of 4642 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
of 4791 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 2587 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 3213 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 bp
of 3745 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 bp
of 3536 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 4960 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3923:
5052:
5152:
6323:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     030:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3698:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25844:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25944:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45992:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53348:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53448:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .3815:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8860:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57418:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8699
100152
100152
100152
100681
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
113016
1130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42148
42248
45993
46093
49629
49729
53349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53449
57319
61726
61826
66468
66568
71528
                                                                                                                                                                                                                                                                                                                                                                                              11139
25529
26529
33824
33924
5053
6428
6424
6931
```

ACCESSION VERSION KEYWORDS

셤

REFERENCE

COMMENT

```
Search completed: March 15, 2005, 12:34:55 Job time : 1124.5 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOE Joint Genome Institute.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /chromosome="5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .21990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 159423)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21938.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HIG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                       AC008429/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was fainished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, EMBL: Sw:, SMISSPROT: Tr:, TREMBL: WD:, WORMPEP; Information on the WORMPEP database can be found at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (01-APR-2003) Wellcome Trust Sanger Institute, Hinxton, Submitted (01-APR-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquirises:

On Apr 1, 2003 this sequence version replaced gi:28445802.

Sequence from the Mouse Genome Sequencing Consortium whole genome shotgum may have been used to confirm this sequence. Sequence data from the whole genome shotgun alone has only been used where it has a phred quality of at least 30.
                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL929212 255261 bp DNA linear ROD 01-APR-2003 Mouse DNA sequence from clone RP23-65G6 on chromosome 2, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 255261)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-65G6 is from the RPCI-23 Mouse BAC Library constructed by the group of Pieter de Jong.
Por further details see http://www.chori.org/bacpac/home.htm VBCTOR: pBACe3.6.
Location/Qualifiers
                                                                                                                                                                 Gaps
                                                                          54.7%; Score 31.2; DB 2; Length 219811; 47.7%; Pred. No. 5.5e+02; vative 15; Mismatches 8; Indels 0;
                                                                                                                                                                                                                                                                                                ||:||:||:|| | |::::::::|||||:|| | |::| | :| |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| | |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| 
                                                                                                                                                                                                                                                     8 CCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAG 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center: Wellcome Trust Sanger Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="RP23-65G6"
/clone_lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL929212.8 GI:29466488
35257. .38834
                                                                                                                                                             21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center code: SC
                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    racey, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL929212
misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
AL929212/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
```

FEATURES

DRIGIN

```
AC008429 159423 bp DNA linear PRI 05-NOV-2002
Homo sapiens chromosome 5 clone CTC-308K20, complete sequence.
AC008429
AC008429.6 GI:24580340
                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (03-AUG-1999) Production Sequencing Facility, DOE Joint deformer Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA (bases 1 to 15942) DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Shatter libraries failed to resolve dinucleotide repeat region from 21938 to 21990. Forced join at 21980."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (05-NOV-2002) DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 9498, USA ON Nov 5, 2002 this sequence version replaced gi:15290285.

Draft Sequence Produced by DOE Joint Genome Institute www.jgi.doe.gov the Stanford Human Genome Center www.jgi.doe.gov Quality: Phrap Quality >= 40 99.9% of Sequence;

Estimated Total Number of Errors is 0.1.

NOTE: Shatter libraries failed to resolve dinucleotide repeat region from 21938 to 21990. Forced join at 21980.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 159423)
DOB Joint Genome Institute and Stanford Human Genome Center.
                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 255261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 53.7%; Score 30.6; DB 9; Length 159423; Best Local Similarity 49.1%; Pred. No. 8.8e+02; Matches 26; Conservative 13; Mismatches 14; Indels 0;
                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 ccaccuccuceceeeunnnnuegecaueceecuucecauegeunaaggaaccc
                                                                                                                                                               8 CCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAG 51
Query Match 54.7%; Score 31.2; DB 10; Best Local Similarity 47.7%; Pred. No. 5.4e+02; Matches 21; Conservative 15; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="genomic_DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="CTC-308K20"
```

THIS PAGE BLANK WASPION

```
March 15, 2005, 10:06:47; Search time 2476.25 Seconds (without alignments) 876.189 Million cell updates/sec
                                                                                                                                                                                                         1 ggguccaccuccucgcggun.........sucgcauggcuaagggaccc 57
                                                                                                                                                                                                                                                                                                                                68479088
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                              34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                             'Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                 OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                         IDENTITY NUCDX Gapop 10.0 , Gapext 1.0
                                                                                                                                                                    US-09-699-667E-61
57
                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90 est1:

90 est2:

90 est4:

90 est4:

90 est6:

90 9881:

90 9881:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST:*
                                                                                                                                                                    Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                Searched:
                                                                                                   Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		Description	CF552723 AGENCOURT	ڼ	CC526419 CH240 401	BF686394 602143774	BE902113 601674890	CB991305 AGENCOURT	AW681122 WS1 8 E02	AW681043 WS1 8 E02	AW283452 LG1_272 E	CL629016 OR BBa002		CL173974 104_377_1	CL173973 104 377 1		BMS53956 AGENCOURT		BE682984 181389 MA	BF796052 602259070	60361	CC593873 CH240 395	CR363279 CR363279	BE794244 601591516	BE562270 601344732	CL316408 ZMMBBc037
SUMMARIES		QI	CF552723	BI457296	CC526419	BF686394	BE902113	CB991305	AW681122	AW681043	AW283452	CL629016	CL713844	CL173974	CL173973	CN127442	BM553956	BE901025	BE682984	BF796052	BM006402	CC593873	CR363279	BE794244	BE562270	CL316408
		8	7	4	σ	N	7	9	~	α	~	σ	σ	σ	σ	7	4	~	7	~	4	9	7	0	7	σ
		Match Length	857	1182	622	726	807	869	382	405	448	537	694	723	726	822	1057	808	538	777	808	823	658	971	1107	339
مان	Query	Match	57.9	57.5	56.5	55.8	55.8	55.1	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.0	53.7	53.7	53.7	53.7	53.3	53.3	53.3	53.0
		Score	33	32.8	32.2	31.8	31.8	31.4	31	31	31	31	31	31	31	31	31	30.8	30.6	30.6	30.6	30.6	30.4	30.4	30.4	30.2
	Result	No.		7 U	٣	4	2	υ υ	7	80	6	10	11	c 12	13	14	15	16	17		c 19	20	c 21	22	23	c 24

57.9%; Score 33; DB 7; Length 857; 50.9%; Pred. No. 1.7e+02;

Query Match Best Local Similarity

BJ004361 BJ004361 BE386169 601274411 BJ728719 BJ728719 AU077016 AU077016 CR767128 DKFZ9469L CP122359 UI-HF-CB0 BM798569 K-EST0082 AL651473 WD06D09.X AU099987 AU099987 A182543 WD73263.X CB126416 K-EST00175 CN257892 170006001 AL701336 DKFZD686L CL9344469 K-EST0198 CD609316 56067704H CN257890 170006002 AU067971 AU067971 C23613 C23613 Rice CR14460 UI-HF-CB0 BM836423 K-EST0112	C CF552723  C CF552723  M AGENCOURT 15595333 NIH MGC 183 Homo sapiens CDNA clone IMAGE:30529107 5', mRNA sequence.  CF552723  CF552723.1 GI:34889557  EST.  Homo sapiens (human)  Homo sapiens (human)  Homo sapiens (human)  Homo sapiens (human)  M	ocurement: Dr. Michael Brownstein rary Preparation: Invitrogen Corp rary Arrayed by: The I.M.A.G.E. Consortium (LLNL) enclud by: Agencourt Bioscience Corporation ough the I.M.A.G.E. Consortium/LLNL at: age.llnl.gov  age.llnl.gov ty sequence stop: 680. Location/Qualifiers 1857  / Corganism="Homo sapiens" // Aganism="Homo sapiens" // Aganism="Homo sapiens" // Aganism="Homo sapiens" // Acganism="Homo sapiens" // Acganism="Hom
BJ0004361 BE386169 BJ728719 AU077016 CR122359 AM798569 AM651473 AU099987 ALCS1473 AU099987 ALCS1473 AU09987 ALCS144469 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316 CD609316	ALIGNMENT  857 bp  857 bp  MENA sequence.  19557  Chordata, Cra Primates; Cat  nci.nh.gov/.  of Health, Ma  Gerhard, Ph.D  nnonics  rethesda, MD 208  1.nlh.gov	Tation: Invitable  ed by: The I Agencourt Bi MGC clone G .M.A.G.E. Cor.  io. C column: .e. c column: .e. stop: 680.  malifiers ."Home sapiens "mkNA" ."Home sapiens "mkNA" ."DH10B-TonA ( DH10B-TonA ( DH10B-TonA ( DH10B-TonA ( TonA ( T
4 4 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1	52723 NCCURT 1559533 N. GE:30529107 5', ml 52723.1 GI:348899.0 sapiens (human) o sap	Tissue Procurement: Dr. Michael Browns CDNA Library Preparation: Invitrogen CDNA Library Arrayed by: The I.M.A.G.I DNA Sequencing by: Agencourt Bioscient Clone distribution: MGC E. Consortiut http://image.llnl.gov http://image.llnl.gov column: 04 High quality sequence stop: 680. Location/Qualifiers 1. 857 /organism="Homo sapiens" /mol_type="mRNA" /db refe="mRNA" /db refe="mRNA" /db host="MHAGE:30529107" /clone="image:"MHAGE:30529107" /clone="image:"MAGE:30529107" /clone="image:"MHAGE:30529107" /clone="image:"MGW-SPORT6:1; Site:1: /clone="image:"MHAGE:30506" /clone="image:"MHAGE:30529107" /clone="image:30506" /clone="image:30506" /clone="image:30506" /clone="image:30506"
0.00 0.00	CP552723 AGENCOURT 155 IMAGE:3052910 CF552723.1 GF552723.1 GF552723.1 GEST. Homo sapiens Homo sa	Tibsue Free CDNA Libb CDNA Seque Clond thriff found thriff http://im High quall
0000000 0 000 000 00 888888888888888888	RESULT 1 CF55773/C LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT	FEATURES SOUTCE

```
Sequencing
The British Columbia Cancer Agency Genome Science Centre
600 W. 10th Ave, Vancouver, British Columbia, Canada V5Z 4E6
Tel: 604-877-6208
Fax: 604-877-6208
Fax: 604-877-6208
Email: rholt@bcgsc.ca
Clones are derived from the bovine BAC library CHORI-240
(http://www.chori.org/bacpac/bovine240.htm). For BAC library
availability, please contact Pieter de Jong (pdejong@mail.cho.org).
Clones may be purchased from BACPAC Resources
(http://www.chori.org/bacpac/ordering.information.htm). This work
was undertaken as part of the International Bovine BAC Mapping
Consortium (IBBMC) by CSIRO Livestock Industries, Australia and the
Plate: 401 row: C column: 15
Seq primer: SP6
Class: BAC ends.
                                                                                          1 (bases 1 to 622)
Holt,R., Stott,J., Yang,G., Barber,S., Smailus,D., Prabhu,A.-L.,
Tsai,M., Cloutier,A., Lee,D., Girn,N., Olson,T., Mayo,M.,
Butterfield,Y., Kirkpatrick,R., Liu,J., Guin,R., Chan,A.,
Mathewson,C., Wye,N., Masson,A., Brown-John,M., Jones,S.,
Schein,J., Marra,M., de Jong,P., Keele,J.W. and Kappes,S.M.
Bovine BAC End Sequences from Library CHORI-240, PLATES 399 to 478
Outher GSSB: CH240 401C15.T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryora, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 726)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                              Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
Bovinae; Bos.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF686394 1706_46 Homo sapiens cDNA clone IMAGE:4304611 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /schl_type="Blood"
/clone_lib="CHORI-240"
/note="Vector: pTARBACI.3; Site 1: MboI; Site_2: MboI;
/note="Vector: pTARBACI.3; Site 1: MboI; Site_2: MboI;
/noterord bull 1i. Domino 99375; CHORI-240 Bovine BAC
library (Male) produced by Pieter de Jong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCGGUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.5%; Score 32.2; DB 9;
50.9%; Pred. No. 3e+02;
iive 13; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic DNA"
/strain="breed: Hereford"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
1. .622
/organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9913"
/clone="CH240_401C15"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BF686394.1 GI:11971802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 50.9% tes 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BF686394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /Mol type="mRNA"
// db xref="taxon:9606"
/clone="INARNA"
/db xref="taxon:9606"
/clone="INARNA"
/lab_host="mRNA"
/lab_host="mR
      ö
                                                                                                                                                                                                                                                                                          BI457296 1182 bp mRNA linear BST 21-AUG-2001
603185617F1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:5258380 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSS 17-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E (Bases 1 to 1182)

S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbe-r@mail.nih.gov

Tissue Procurement: ATCC
CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

Clone distribution: AGC clone distribution information can be http://image.llnl.gov

Plate: LLCM1870 row: a column: 05

High quality sequence stop: 335.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            622 bp DNA linear GSS 17.
CH240_401C15.TARBAC13P2 CHORI-240 Bos taurus genomic clone
CH240_401C15, genomic survey sequence.
          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57.5%; Score 32.8; DB 4; Length 1182; 52.3%; Pred. No. 2.18+02; ive 14; Mismatches 7; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUCGCAUGGC 47
      13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                             BI457296.1 GI:15247965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC526419.1 GI:31844707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23; Conservative
          29; Conservative
                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
BI457296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 23; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSS.
Bos taurus
Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                 RESULT 2
BI457296/c
                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
          Matches
                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
CC526419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
```

Gaps

57 . 0

ORIGIN

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CB991305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
CB991305/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                             /tissue type="leiomyosarcoma cell line"
/lab host="PuloB (phage-resistant)"
/clone lib="NIH MGC 46"
/clone lib="NIH MGC 46"
/note="Organ: uterus; Vector: pOTB7; Site_1: Xho1; Site_2:
ECORI; cDNA made by oligo-dT prinning. Directionally cloned into ECORI/Xho1 sites using the following 5' adaptor:
GGACGAG(G). Size-selected >SOODp for average inner size
1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley)
using ZAP-CDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
Library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 29-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 807)
MIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601674890F1 NIH MGC_21 Homo sapiens cDNA clone IMAGE:3957479 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: More Genomics, Inc. found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LLCM835 row: d column: 24
cDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM1170 row: d column: 20
High quality sequence stop: 691.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGG 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.8%; Score 31.8; DB 2; Length 726; 54.9%; Pred. No. 4.1e+02; ive 11; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="choriocarcinoma"
/lab host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                        /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4304611"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             807 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 778.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:3957479"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE902113.1 GI:10391968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
BE902113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
Matches 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE902113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
BE902113
                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
```

```
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGGACGG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by
Ling Hong in the laboratory of Gerald M. Rubin (University
of Galifornia, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CB991305

AGENCOURT_13666258 NIH_MGC_148 Homo sapiens cDNA clone
IMAGE:30332633 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5'-TTTTTTTTTTTTTTVN-3', size-selected for average insert size 2.3 kb and normalized to ROT 5. This is a primary library enriched for full-lenght clones and constructed
                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brownstein (NHGRI) with help
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

    (bases 1 to 869)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:30336633"
/tissue_type="pre-eclamptic placenta"
/lab_host="DH10B TonA"
/clone_lib="NH10B TonA"
/note="Organ: placenta; Vector: pBluescriptR; Site 1:
all-xhol; Site_2: BamH; Library is oligo-dT primed and
directionally cloned using primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapberrement: Dr. Stefan Hansson
Tissue Procurement: Dr. Stefan Hansson
CDNA Library Preparation: Michael J. Brownstein (NHGRI) with he
and advice from Pierco Carninci (RIEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LinL at:
http://image.llnl.gov
Plate: NDAM349 row: p column: 18
High quality sequence stop: 489.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                    624 GCTCGCCCACCTGGCTGCTGTCAATGGGCAGGGGGGCTGCAGAGGGCAGGGG 674
                                                                                                                                                                                                                                                                                                                                                                                                             2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGG 52
                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUA 49
                                                                                                                                                                                                                                                                                     55.8%; Score 31.8; DB 2; Length 807; 54.9%; Pred. No. 4.1e+02;
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55.1%; Score 31.4; DB 6; 51.0%; Pred. No. 5.6e+02;
                                                                                                                                                                                                                                                                                                                                                   11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CB991305.1 GI:30285837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                   28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .869
```

USA

VERSION KEYWORDS SOURCE ORGANISM

TITLE JOURNAL COMMENT

REFERENCE AUTHORS

DEFINITION

RESULT 7 AW681122

셤

ACCESSION

```
1. .405

// Organism="Sorghum bicolor"
// Ab_aref="taxon:4558"
// Ab_aref="taxon:4558"
// Clone lib="Water-stressed 1 (WS1)"
// note="Organ: Mix of 5-week old plants on days 7 & 8 after water was withheld; Vector: Lambda Zap; Site_1: Rho1;
Site_2: RoRN: The library was made from poly-A RNA in the cloning vector lambda ZAP II. Clones to be sequenced were prepared by mass excision."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW283452
LG1_272_E01.g1_A002 Light Grown 1 (LG1) Sorghum bicolor cDNA, mRNA
                                                                                                                                                                                                                                      Sequences have been trimmed to exclude PolyA, vector and regions below Phred quality 16. The threshold for highest quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Enkaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequences have been trimmed to exclude PolyA, vector and regions below Phred quality 16. The threshold for high quality sequence is 5.0. Three-prime sequences, which are obtained with PolyTMix or T7 sequencing primer, are presented as the reverse complement. Seq primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cordonnier-Pratt, M.-M., Gingle, A., Marsala, C. and Pratt, L. H. Cordonnier-Pratt, M.-M., Gingle, A., Marsala, C. and Pratt, L. H. Targat database from Sorghum: light-grown seedlings
Unpublished (2000)
On Jan 6, 2000 this sequence version replaced gi:6857936.
Contact: Cordonnier-Pratt MM Bioinformatics
Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
Tel: 706 583 0210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 GGTTCCAGCTCCTCCACGACCTGGCTGATCGCATTAGCATGGCAAGGGAC 64
                     Contact: Cordonnier-Pratt MM
Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271,
Tel: 706 542 1860
Fax: 706 583 0210
Email: mmpratt@uga.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNNNGGGCAUGCGGCUUCGCAUGGCUAAGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 54.4%; Score 31; DB 2; Length 405; Best Local Similarity 49.1%; Pred. No. 6.9e+02; Matches 27; Conservative 13; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Sorghum bicolor"
                                                                                                                                                                                                                                                                                                                              Seq primer: JEN REV
High quality sequence stop: 405
POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence start: 3
High quality sequence stop: 448
                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sorghum bicolor (sorghum)
Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW283452
AW283452.3 GI:17886563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mmpratt@uga.edu
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence.
                                                                                                                                                                                                                                                                                                     is 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AW283452
                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Sorghum bicolor" /mol_type="mRNA" /mol_type="mRNA" /mol_type="mRNA" /db_xref="taxon:4558" /clone lib="water-stressed 1 (WS1)" /note="Organ: Mix of 5-week old plants on days 7 & 8 after water was withheld; Vector: Lambda Zap; Site 1: Xho1; Site 2: EcoR1; The library was made from poly-A RNA in the cloning vector lambda ZAP II. Clones to be sequenced were prepared by mass excision."
                                                                                                                            Awes1122 382 bp mRNA linear EST 19-JUL-2000
WS1_B_E02.g1_A002 Water-stressed 1 (WS1) Sorghum bicolor cDNA, mRNA
sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AW681043 405 bp mRNA linear EST 19-JUL-2000
WS1 8 E02.bl_A002 Water-stressed 1 (WS1) Sorghum bicolor cDNA, mRNA
sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Wagnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Sorghum.

1. (bases 1 to 382)

Cordonnier-Pratt, M.-M., Gingle, A., Marsala, C., Sudman, M. and Pratt, L.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: mmpratt@uga.edu
Sequences have been trimmed to exclude PolyA, vector and regions
below Phred quality 16. The threshold for highest quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sorghum bicolor
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Bupermatophyta; Magnoliophyta; Liliopaida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
Tal: 706 542 1860
Fax: 706 583 0210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGAC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cordonnier-Pratt, M.-M., Gingle, A., Marsala, C., Sudman, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GGTTCCAGCTCCTCCACGACCTGGCTGATCGCATTAGCATGGCAAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
   370 GGGTGCTCCTCCGGGACCCTTGCTGGTCATGGCCCTGCGCGTGCCGA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54.4%; Score 31; DB 2; Length 382; 49.1%; Pred. No. 6.8e+02; ive 13; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        An EST database from Sorghum: water-stressed plants
Unpublished (2000)
Contact: Cordonnier-Pratt MM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pratt, L.H.
An BST database from Sorghum: water-stressed plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seg primer: T7
High quality sequence stop: 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                 Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                             AW681122
AW681122.1 GI:7554830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AW681043
AW681043.1 GI:7554749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
```

FEATURES

SOURCE

REFERENCE AUTHORS

TITLE

DEFINITION

RESULT 8 AW681043

셤

ð

ACCESSION

VERSION KEYWORDS

Best Loca Matches

ORIGIN

ö

Gaps

. 0

```
/tissue_type="young leaves"
| Tab host="DHIO8-T1 phage resistant"
|/clone lib="0R BBa"
|/note="Vector:"pAGIBAC1; Site_1: HindIII; Site_2: HindIII"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CL173974 723 bp DNA linear GSS 06-JAN-2004 104 377 10891241 148 31792 377 Sorghum methylation-filtered library (LibID: 104) Sorghum bicolor genomic clone 10891241, genomic survey
  CL713844 694 bp DNA linear GSS 26-JUL-2004
OR BBa0038P20.r OR BBa Oryza rufipogon genomic clone OR BBa0038F20
3', genomic survey sequence.
2'113844
                                                                                                                                                            Oryza rufipogon
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopaida; Poales; Poaceae;
Brhartoideae; Oryzae; Oryza.
I (bases 1 to 694)
Kim,H., Yu,Y., Stum,D., Yost,D., Rao,K., Luo,M., Jetty,R.,
Kudrna,D., Muller,C., Hatfield,J., Soderlund,C. and Wing,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sorghum bicolor (sorghum)
Sorghum bicolor
Sorghum bicolor
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 723)
Budiman, M.A., Flick, E., Jones, J., Nunberg, A., Citek, R.W.,
Budiman, D., Rohlfing, T., Bradford, K., Fries, J., McMenamy, J.,
Trani, L., Isak, A., Zimmerman, C., Lakey, N. and Bedell, J.A.
GeneThresher methylation filtered genomic sequences from Sorghum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                         OMAP Project
Unpublished (2004)
Context: Rod A. Wing
Arizona Genomics Institute
University of Arizona
Porbes Building Room 303, Tucson, AZ 85721-0036, USA
Fal: 520 621 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54.4%; Score 31; DB 9; Length 694; 50.9%; Pred. No. 7.3e+02; tive 12; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FORWARD: TAR TAC GAC TCA CTA TAG GG
BACKWARD: CAC TCA TTA GGC ACC CCA
Insert Length: 161 Std Error: 0.00
Plate: 0038 row: F column: 20
Seg primer: CAC TCA TTA GGC ACC CCA
Class: BAC ends.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Oryza rufipogon"
/mol type="genomic DNA"
/db_xref="taxon:4529"
/clone="OR_BBa0038F20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: http://genome.arizona.edu
PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CL173974
CL173974.1 GI:40686420
                                                                                               CL713844.1 GI:50600882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 50.9
Matches 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bicolor
Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .694
                                                                                                                                            Oryza rufipogon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Source
    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
CL173974/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
/db_xref="taxon:4558"
/folone lib="Light Grown 1 (IG1)"
/folone lib="Light Grown 1 (IG1)"
/note="Grgan: 10- to 14-day-old light-grown (greenhouse)
seedlings; vector: Lambda Zap; Site_1: XhoI; Site_2:
ScRI; The library was made from poly-A RNA in the cloning
vector lambda ZAP II.
Clones to be sequenced were
prepared by mass excision."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Oryza rufipogon"
/mol type="genomic DNA"
/mol type="genomic DNA"
/mol type="taxon:4529"
/clone="0R BBa0028L22"
/tissue_type="Young leaves"
/lab_hoste="DH10B-T1 phage resistant"
/clone lib="0R BBa"
/note="Vector: pAGIBAC1; Site_1: HindIII; Site_2: HindIII"
                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CL629016 537 bp DNA linear GSS 01-JUL-2004
OR_BBa0028L22.f OR_BBa Oryza rufipogon genomic clone OR_BBa0028L22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza rufipogon
Oryza rufipogon
Oryza rufipogon
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopaida; Poalea; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        377 GGGCCAGCATCTCGCGATCGCACTTGGCCTTGCGGCAGTCCATGGCTCAATGGCC 431
                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUCGCAUGGCUAAGGGAC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 537)
Kim, H., Yu, Y., Stum, D., Yost, D., Rao, K., Luo, M., Jetty, R.,
Kudrna, D., Muller, C., Hatfield, J., Soderlund, C. and Wing, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OWAP Project
Unpublished (2004)
Unpublished (2004)
Arizona Genomics Institute
University of Arizona
Tel: 520 626 9595
Eax: 520 621 1259
Email: http://genome.arizona.edu
                                                                                                                                                                                                         54.4%; Score 31; DB 2; Length 448; 49.1%; Pred. No. 6.9e+02; ive 13; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 537;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch
1 Similarity 50.9%; Pred. No. 7.1e+02;
28; Conservative 12; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FORMARD: TAM TAK GAC TCA CTA TAG GG
BACKWARD: CAC TCA TTA GGC ACC CCA
INSERT LENGth: 161 Std Brror: 0.00
Plate: 0028 row: L column: 22
Seg primer: TAA TAC GAC TCA TAG GG
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', genomic survey sequence. CL629016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CL629016.1 GI:49134446
                                                                                                                                                                                                                                                         27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .537
                                                                                                                                                                                                                                 Best Local Similarity
Matches 27; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 28;. Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCR PRimers
                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
CL629016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
CL713844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
```

g

ö

Gaps

ö

EST 01-APR-2004

```
/oultivar="BTX623"
/oultivar="BTX623"
/oultivar="BTX623"
/oultivar="BTX623"
/oultivar="BTX623"
/olone="BHX011"
/lab_host="DHI0B-T1 phage-resistant E. coli"
/lab_host="Adid- and alkaline-treated roots"
/olone lib="Adid- and alkaline-treated roots"
/orde="Organ: Root; Vector: pME185-FL3; Site 1: XhoI;
/orde="Organ: Root; Vector Roots of Particle and PTX63 sorghum
seedlings grown in hydroponic culture. HC1 was added to a pH of 3.0 to some seedlings, KOH to a pH of 9.0 for others. Roots were harvested 3, 12 and 27 hr after addition and pooled for RNA preparation. Double-stranded cDNA was cloned unidirectionally into different DraIII sites of the pME185-FL3 vector (5-prime DraIII site is
                                                     /note="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into E. coli cells. This is a methylation-filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cordonnier-Pratt M.-M., Suzuki, Y., Sugano, S., Klein, R.R., Liang, C., Sun, F., Sullivan, R., Lim, S., Eastman, A. and Pratt, L.H.
An EST database from Sorghum: acid- and alkaline-treated roots
Unpublished (2003)
Other ESTB: RHOH1_23 B11.g3 A002
Contact: Cordonnier-Pratt MM
Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: mmpratt@uga.edu
Library constructed by Dr. Yutaka Suzuki and Dr. Sumio Sugano in
the Human Genter, University of Tokyo Institute of Medical
Science; plant material and RNA prepared at Texas A & W University;
sequencing done in the Laboratory for Genomics and Bioinformatics,
University of Georgia. Sequence ends have been trimmed to exclude
vector and regions below Phred quality 16. Three-prime sequences
are presented as their reverse complement and have been trimmed to
exclude polyA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Sorghum.

1 (bases 1 to 822)
  clone_lib="Sorghum methylation-filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RHOH1 23 B11.b1 A002 Acid- and alkaline-treated roots Sorghum bicolor CDNA clone RHOH1_23_B11_A002 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGAC 55
                                                                                                                                                                                                                                                                                Length 726;
                                                                                                                                                                                                                                                                                54.4%; Score 31; DB 9; Length 726
49.1%; Pred. No. 7.3e+02;
ive 13; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seg primer: Sug3-14 (TAGTCTAGCGGCCGCGACC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'organism="Sorghum bicolor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 822 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CN127442.1 GI:45953480
                                                                                                                                                                                                                                                                                                                                      27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 706 542 1860
Fax: 706 583 0210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sorghum bicolor
                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CN127442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CN127442
                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
CN127442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CL173973 10891241 116 31793 377 Sorghum methylation-filtered library (LibID: 104) Sorghum Dicolor genomic clone 10891241, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly_sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into E. coli cells. This is a methylation-filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Sorghum methylation-filtered library (LibID: 104)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 726)

Budiman, M.A., Flick, E., Jones, J., Nunberg, A., Citek, R.W., Robbins, D., Rohlfing, T., Badford, K., Fries, J., McMenamy, J., Trani, L., Isak, A., Zimmerman, C., Lakey, N. and Bedell, J.A. GeneThresher methylation filtered genomic sequences from Sorghum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGAC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 31; DB 9; Length 723;
Pred. No. 7.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (2004)
Contact: Bedell JA
Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Fax: 314 615 5975
Email: jbedell@oriongenomics.com
Plate: 37 row: p column: 17
Seq primer: T3 Reverse
                                    St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. 726
/organism="Sorghum bicolor"
/mol_type="genomic DNA"
/cultivar="ATx623"
                                                                                                                                                                                                                                                                                                            /organism≈"Sorghum bicolor"
Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO
Tel: 314 615 6979
Fax: 314 615 5975
Email: jbedell@oriongenomics.com
Plate: 377 row: p column: 17
Seq primer: SWfor Forward
Class: shotgun
High quality sequence stop: 723.
                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
/cultivar="ATx623"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 726.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:4558"
/clone="10891241"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:4558"
/clone="10891241"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CL173973.1 GI:40686419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54.4%;
49.1%;
                                                                                                                                                                                                                                                                                      . .723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CL173973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
CL173973
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bource
                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
1057 bp mRNA linear EST 20-FEB-2002
AGENCOURT_6546899 NIH_MGC_119 Homo sapiens cDNA clone IMAGE:5742257
EM553956
CACTGTGTG, 3-prime DrallI site is CACCATGTG). XhoI excises the cDNA insert."
                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MINIMALAIN BULNETTAIN FIRMATERS CATAININI, HOMINIDARE, HOMO.

S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-romail.nih.gov

Tissue Procurement: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM12760 row: b column: 18

High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                0; Gaps
                                                                                                                                                                    1 egguccaccuccucecegunnnnnugegeaueceguucecaueeguaageage 55
                                                                       Query Match 54.4%; Score 31; DB 7; Length 822; Best Local Similarity 49.1%; Pred. No. 7.4e+02; Matches 27; Conservative 13; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                      BM553956.1 GI:18793145
                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                          EST.
                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                          RESULT 15
BMS53956
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                    g
                                                                                                                                                   ઠ
```

ö Gaps ô Query Match 54.4%; Score 31; DB 4; Length 1057; Best Local Similarity 44.7%; Pred. No. 7.6e+02; Matches 21; Conservative 16; Mismatches 10; Indels

2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCU 48

ઠ 윱 Search completed: March 15, 2005, 15:20:12 Job time : 2484.25 secs

HIS PAGE BLANK (USPTO)

15052, A 3088, Ap 7, Appli

Sequence

119, App 121, App 2265, Ap 111, App

Sequence Sequence Sequence

13039, A

Sequence Sequence Sequence

Run on:

us-09-699-667e-62.siz.rnpb

```
WESULO.

US-10-346-880-40

WESULO.

Sequence 40, Application US/10346880

PUBLication No. US2030232035A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Polo, John M

APPLICANT: Lolay, Stephen N.W.

APPLICANT: Chang, Stephen N.W.

APPLICANT: Chang, Stephen N.W.

APPLICANT: Chang, Stephen N.W.

APPLICANT: Driver, David A

APPLICANT: Belli, Barbara A

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS

FILE REFERENCE: PPO1146_213 (CHIR-1146/11US)

CURRENT FILING DATE: 2003-01-16

PRIOR FILING DATE: 2000-02-11

PRIOR PILING DATE: 1996-11-12

PRIOR PILING DATE: 1996-11-12

PRIOR PILING DATE: 1996-10-30

PRIOR APPLICATION NUMBER: 08/739,199

PRIOR PILING DATE: 1996-10-18

PRIOR APPLICATION NUMBER: 08/346,472

PRIOR APPLICATION NUMBER: 08/346,472

PRIOR APPLICATION NUMBER: 08/346,472

PRIOR APPLICATION NUMBER: 08/346,472

PRIOR APPLICATION NUMBER: 08/346,70

PRIOR PILING DATE: 1994-01-18

PRIOR APPLICATION NUMBER: 08/198,450

PRIOR PILING DATE: 1994-02-18

PRIOR PILING DATE: 1994-02-18

PRIOR PILING DATE: 1993-09-15

PRIOR PILING DATE: 1993-09-15

PRIOR PILING DATE: 1993-09-15

PRIOR PILING DATE: 1993-09-15

PRIOR PILING DATE: 1993-09-15
US-10-628-109-105
US-09-908-975-11055
US-09-901-262-7
US-09-901-262-7
US-10-628-109-119
US-10-628-109-119
US-10-628-109-111
US-09-908-975-13039
US-09-908-975-13039
US-09-908-975-13039
US-09-908-975-13039
US-09-908-975-13125
US-09-908-975-13125
US-09-908-975-13135
US-09-864-636A-381
US-09-961-077-1234
US-09-961-077-1234
US-09-961-077-606
US-09-961-077-606
US-09-961-07-6569
US-09-961-07-6569
US-09-961-07-6569
US-09-961-07-6569
US-09-961-07-6569
US-09-961-07-666
US-10-131-827-5659
US-10-333-704
       March 15, 2005, 15:52:23 ; Search time 372.25 Seconds (without alignments) 910.856 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 80, Sequence 80, Sequence 80, Sequence 39, Sequence 39, Sequence 118, Sequence 106, Sequence 106, Sequence 106,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                         ggguccaccuccucgcggun......ggggcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                Published Applications Nat.

1. (1902 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

1. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

2. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

2. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

4. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

5. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

6. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

7. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

8. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

9. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

10. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

11. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

12. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

13. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

14. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

15. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

16. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *

17. (2002 6) prodata 1/1 pubpna 1/1050 PUBCOMB. seq: *
                                                                                                                                                                                                                                                                                           5307542
                    5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-346-880-40

US-10-346-880-80

US-10-150-407-40

US-10-150-407-80

US-10-20-362-39

US-10-628-109-118

US-10-628-109-106

US-10-628-109-107

US-10-628-109-107

US-10-628-109-107

US-10-628-109-107

US-10-628-109-107
                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                              5537552 segs, 2974263231 residues
                    GenCore version (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                        Applications NA:*
                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                           nucleic search, using sw model
                                                                                                                                                                                                                                   Gapop 10.0 , Gapext 1.0
                                                                                                                                                            US-09-699-667E-62
57
1 ggguccaccuccucg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110
110
118
118
118
118
                                                                                                                                                                                                                    IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                        Published
                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match
                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
24
24
23
3
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002
2002
4444
2002
4444
                                                                           OM nucleic
                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                          Database
```

26432

0000

Result

Sequence 381, App Sequence 382, App Sequence 5, Appli Sequence 134, Ap Sequence 9, Appli Sequence 38, Appl Sequence 113, Appl Sequence 113, Appl Sequence 109, Appl Sequence 109, Appl Sequence 7514, Appl Sequence 7514, Appl

109, App 7514, Ap 1308, Ap 6, Appli 5639, Ap

Sequence Sequence Sequence

Sequence Sequence Sequence

ALIGNMENTS

Sequence 18325, A Sequence 19116, A Sequence 98, Appl Sequence 381, Appl Sequence 382, Appl Sequence 381, Appl Sequence 381, Appl Sequence 381, Appl Sequence 382, Ap

```
APPLICANT: Dubensky Jr, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-36-880-80-80

Sequence 80, Application US/10346880

Publication No. US20030232035A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Dibarez, Carlos E

APPLICANT: Chang, Stephen M.W.

APPLICANT: Chang, Stephen M.W.

APPLICANT: Joily, Douglas J

APPLICANT: Joily, Douglas J

APPLICANT: David A

APPLICANT: David A

APPLICANT: Belli, Barbara A

ITILE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS

FILE REFERENCE: PPOINT HOWBER: US/10/346,880

CURRENT PELICATION NUMBER: 09/503,138

PRIOR APPLICATION NUMBER: 09/503,138

PRIOR APPLICATION NUMBER: 09/191,747

PRIOR APPLICATION NUMBER: 09/191,747

PRIOR APPLICATION NUMBER: 09/191,747

PRIOR APPLICATION NUMBER: 09/191,747

PRIOR APPLICATION NUMBER: 09/194,796

PRIOR APPLICATION NUMBER: 08/196,480

PRIOR APPLICATION NUMBER: 08/376,184

PRIOR APPLICATION NUMBER: 08/346,472

PRIOR APPLICATION NUMBER: 08/346,450

PRIOR APPLICATION NUMBER: 08/346,450

PRIOR APPLICATION NUMBER: 08/196,450

PRIOR FILING DATE: 1991-09-15

PRIOR FILING DATE: 1993-09-15

PRIOR FILING DATE: 1993-09-15

PRIOR FILING DATE: 1993-09-15

PRIOR FILING DATE: 1993-09-15
                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
; OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68
US-10-346-880-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                              ; FEATURE:
; OTHER INFORMATION: Artificial sequence: nested primer HDV17-68
US-10-346-880-40
                                                                                                                                                                                     Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 17; Length 52;
                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                       DB 17;
                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 recacercercecedereceaecrecederec 31
                                                                                                                                                                                                                               12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51.6%; Score 29.4; I
58.1%; Pred. No. 66;
cive 12; Mismatches
                                                                                                                                                                                     Score 29.4; I
Pred. No. 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 128
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-150-407-40; Sequence 40, Application US/10150407; Publication No. US20040029278A1; GENERAL INFORMATION:
                                                                                                                                                                                  51.6%;
58.1%;
                                                                                                                                                                                Query Match
Best Local Similarity 58.19
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 58.1
Matches 18; Conservative
SEQ ID NO 40
LENGTH: 52
TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
US-10-346-880-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS: ADDRESS: ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 51.6%; Score 29.4; DB 17; Length 52; Best Local Similarity 58.1%; Pred. No. 66; Matches 18; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                      COUNTRY: US.

ZIP: 98104-7092

COMPUTER READABLE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: 1BM PC compatible
COMPUTER: 1BM PC Compatible
COPERATING SYSTEM: PC-DOS/MS-DOS
COFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407

FILING DATE: 17-MAY-2002
CLASSIFICATION: CURROWn>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: MCMAGEERS, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCACCTCCTCGCGGTCCGACCTGGGCATCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Jul-1999
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; SEQUENCE DESCRIPTION: SEQ ID NO: 40: US-10-150-407-40
Polo, John M.
Jolly, Douglas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                          CITY: Seattle
STATE: Washington
```

```
RESULT 6
US-10-391-441-39
                                                                             US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-391-441-39
                                                                                                                      Query Match
                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
US-09-507-362-39
Sequence 39, Application US/09507362
Feducation No. US20030096397A1
GENERAL INFORMATION:
Polo, John M.
Belli, Barbar A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION:
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 701 Fith Avenue, Suite 6300
CITY: Seattle
STATE: Washington
COUNTRY: USA
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-P6-2000
CLASSIPTOATION: CURKNOWN>
ATTORNY/AGENT INFORMATION:
                                                                         PRIOR APPLICATION DATA:

APPLICATION NUMBER: U5/09/350,522

ATTORNEY/AGENT: NPCRANTION:

NAME: MCMASTERS, David D.

REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 930049.423DI / 1146.010

TELECOMMULCATION INFORMATION:

TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFRENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMULCATION INFORMATION:
TELECOMMULCATION (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
51.6%; Score 29.4; D
Best Local Similarity 58.1%; Pred. No. 66;
Matches 18; Conservative 12; Mismatches
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIPICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                   TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPAX: (206) 682-4
INFORMATION FOR SEQ ID NO: 39
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
```

```
MACRO-MOLECULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
Seed Intellectual Property Law Group PLLC
STREET: 701 Fifth Avenue, Suite 6310
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Seattle
CONTRY: USA
COUNTRY: USA
COUNTRY: USA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION NOMER: US/10/391,441
FILING DATE: 17-Mar-2003
CLASSIFICATION: cUnknown>
                                                                                          Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-F6-2000
ATTORNEY/AGENT INFORMATION:
NAME: MCMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                       DB 10;
91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 50.9%; Score 29; DB 17; Best Local Similarity 58.6%; Pred. No. 91; Matches 17; Conservative 12; Mismatches 0.
                                                                                                                                 12, Mismatches
                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                        27 TCCACCTCCTCGGGTCCGACCTGGGCAT 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                       50.9%; Score 29; 58.6%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                 ; Sequence 39, Application US/10391441; Publication No. US20030232058A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 39: SEQUENCE CHARACTERISTICS:
                                                                                                            Best Local Similarity 58.6%
Matches 17; Conservative
```

```
APPLICANT: Browdish, Katherine S.
APPLICANT: Erederickson, Shana
APPLICANT: Trederickson, Shana
APPLICANT: Lin, Ying-Ch
APPLICANT: Lin, Ying-Ch
APPLICANT: Maruyama, Toshiaki
APPLICANT: Maruyama, Toshiaki
TITLE OF INVENTION: NESTED OLIGONUCLEOTIDES CONTAINING A HAIRPIN FOR NUCLEIC ACID
TITLE OF INVENTION: AMPLIFICATION
FILE REFERENCE: 1087-35 DIV
CURRENT APPLICATION NUMBER: US 60/254,669
FRIOR APPLICATION NUMBER: US 60/323,400
FRIOR APPLICATION NUMBER: US 60/323,400
FRIOR FILING DATE: 2001-09-19
FRIOR FILING DATE: 2001-09-19
FRIOR FILING DATE: 2001-12-10
NUMBER OF SEQ ID NOS: 231
SEQ ID NO 107
LENGTH: 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-LU-6.24-109-109/C

Sequence 108, Application US/10628109

Publication No. US20040101886A1

GENERAL INFORMATION:

APPLICANT: Bowdish, Katherine S.

APPLICANT: Lin, Ying-Chi

APPLICANT: Lin, Ying-Chi

APPLICANT: Lin, Ying-Chi

APPLICANT: Maruyama, Toshiaki

TITLE OF INVENTION: NESTED OLIGONUCLEOTIDES CONTAINING A HAIRPIN FOR NUCLEIC ACID

TITLE OF INVENTION: APPLICATION NUMBER: US/10/628,109

TITLE OF INVENTION: APPLICATION NUMBER: US 60/254,669

PRIOR PELING DATE: 2000-12-11

PRIOR PPLICATION NUMBER: US 60/323,400

PRIOR FILING DATE: 2001-09-19

PRIOR APPLICATION NUMBER: US 10/014,012

PRIOR APPLICATION NUMBER: US 10/014,012

PRIOR PILING DATE: 2001-12-10

NUMBER OF SEQ ID NOS: 231

SOFTWARE: PatentIn version 3.2

SEQ ID NO 108

LENGTH: 55
                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                         Gaps
                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 55;
                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGG 41
                                                                                                                                                      40 GCTGCACCTCCTCGAGGCCCGCTTTCGCGGGCCCTCGAG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40 GCTGCACCTCCTCGAGGCCCGCTTTCGCGGGCCCTCGAG 1
1 Similarity 47.5%; Pred. No. 4.3e+03;
19; Conservative 11; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
42.1%; Score 24; DB 18;
Best Local Similarity 47.5%; Pred. No. 4.3e+03;
Matches 19; Conservative 11; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: nesting oligonucleotide US-10-628-109-107
                                                                                                                                                                                                                                                                                                                                                         Sequence 107, Application US/10628109
Publication No. US20040101886A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: artificial sequence FEATURE:
       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                   US-10-628-109-107/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-628-109-108/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                         Matches
                                                                                                                    ò
                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-628-109-106/c

i Sequence 106, Application US/10628109
i Publication No. US20040101886A1
i GENERAL INFORMATION:
i APPLICANT: Bowdish, Katherine S.
i APPLICANT: Bowdish, Katherine S.
i APPLICANT: McWhirter, John
APPLICANT: McWhirter, John
i APPLICANT: McWhirter, John
i APPLICANT: McWhirter, John
ITLE OF INVENTION: MESTED OLIGONUCLEOTIDES CONTAINING A HAIRPIN FOR NUCLEIC ACID
ITLE OF INVENTION: AMPLIFICATION
FILE REFERENCE: 1087-35 DIV
CURRENT APPLICATION NUMBER: US 60/254,669
i PRIOR FILING DATE: 2000-12-11
PRIOR FILING DATE: 2001-12-10
PRIOR PAPLICATION NUMBER: US 60/23,400
i PRIOR FILING DATE: 2001-12-10
i PRIOR FILING DATE: 2001-12-10
i PRIOR FILING DATE: 2001-12-10
i NUMBER OF SEQ ID NOS: 231
i SOFTWARE: Patentin version 3.2
i SEQ ID NO 106
i LINGTHAND N
                                                                                          Sequence 118, Application US/10628109

Publication No. US2040101886A1

GENERAL INPORMATION:

APPLICANT: Bowdish, Katherine S.

APPLICANT: Lin, Ying-Chi

APPLICANT: Lin, MARBER: US/10/628,109

CURRENT FILING DATE: 2000-12-11

PRIOR PILING DATE: 2000-12-11

PRIOR RILING DATE: 2001-10-19

PRIOR APPLICATION NUMBER: US 60/234,669

PRIOR APPLICATION NUMBER: US 10/014,012

PRIOR APPLICATION NUMBER: US 10/014,012

PRIOR PILING DATE: 2001-12-10

WUMBER OF SEQ ID NOS: 231

SOFTWARE: PatentIn version 3.2

SEQ ID NO 118

LENGTH: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42.1%; Score 24; DB 18; Length 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
42.1%; Score 24; DB 18; Length 51
Best Local Similarity 47.5%; Pred. No. 4.2e+03;
Matches 19; Conservative 11; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40 GCTGCACCTCCTCGAGGCCCGCTTTCGCGGGCCCTCGAG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: nesting oligonucleotide US-10-628-109-118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: nesting oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: artificial sequence
                                                                                  JS-10-628-109-118/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-628-109-106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
US-10-349-143-3088/C
                                 FEATURE:
                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                          Sequence 86, Application US/10612468A
Publication No. US2005010030A1
GENERAL INFORMATION:
APPLICANT: Zhang, Jingwu Z.
APPLICANT: APPLICANT: About Walter Ho, Weller
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION: and Treating Rheumatoid Arthritis
FILE REFERENCE: 057186.00003
CURRENT APPLICATION NUMBER: US/10/612,468A
CURRENT APPLICATION DATE: 2003-07-02
NUMBER OF SEQ ID NOS: 168
SEQ ID NOS: 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: CDR3 nucleic acid sequence of BV16 clonotype derived COTHER INFORMATION: from ST specimen of RA patients
US-10-612-468A-86
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
41.8%; Score 23.8; DB 19; Length 60;
Best Local Similarity 46.5%; Pred. No. 5e+03;
Matches 20; Conservative 11; Mismatches 12; Indels
                                                                                   42.1%; Score 24; DB 18; Length 55; 47.5%; Pred. No. 4.3e+03;
                                                                                                 Best Local Similarity 47.5%; Pred. No. 4.3e+03;
Matches 19; Conservative 11; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18 CCTTCTCGGCACAGTATCCTATGAGCAGTTCTTCGGGCCAGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 CCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                       2 GGUCCACCUCGCGGUNNNNNNGGGCAUGCCUUCGGG 41
                                                                                                                                                                          40 GCTGCACCTCCTCGAGGCCCGCTTTCGCGGGCCCTCGAG 1
                                ; OTHER INFORMATION: nesting oligonucleotide US-10-628-109-108
ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-628-109-105/c
                                                                                                                                                                                                                                       RESULT 11
US-10-612-468A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                   FEATURE:
                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
APPLICANT: MASSERMAN, Alon
APPLICANT: MASSERMAN, Alon
APPLICANT: MINTZ, Eli
APPLICANT: MINTZ, LISA
APPLICANT: MINTZ, LISA
APPLICANT: PAIGLEN, Simchon
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE
FILE OF INVENTION: THAT POPULATE A TRANSCRIPTOME
FILE REFERENCE: 36688-0005
CURRENT APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR PELLING DATE: 2000-07-28
NUMBER OF SEQ ID NOS: 32337
SOFTWARE PATENT OF SEQ ID NOS: 32337
SOFTWARE PATENT OF SEQ ID NOS: 32337
SEQ ID NO 15052
LENGTH: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3088, Application US/10349143

Sequence 3088, Application US/10349143

Publication No. US20040005584A1

GENERAL INFORMATION:

APPLICANT: Cohen, Daniel

APPLICANT: Blumenfeld, Marta

APPLICANT: Chunakov, Ilya

TITLE OF INVENTION: Biallelic markers for use in constructing a high density...

FILE REFERENCE: GENSET.020CP1

CURRENT APPLICATION NUMBER: US/10/342,748

PRIOR PLLING DATE: 1999-10-20

PRIOR FILING DATE: 1999-10-20

PRIOR FILING DATE: 1999-10-20

PRIOR FILING DATE: BARLIER APPLICATION NUMBER: US 60/109,732

PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-21

WUMBER OF SEQ ID NOS: 11796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gape
                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                          Length 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                        40 GCTGCACCTSCTCGAGGCCCGCTTTCGCGGGCCCTCGAG 1
                                                                                                                                                                                                                                                                                                                                                    2 GGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGG
                                                                                                                                                                                                                   Query Match
41.4%; Score 23.6; DB 18;
Best Local Similarity 45.0%; Pred. No. 5.8e+03;
Matches 18; Conservative 12; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 41.4%; Score 23.6; DB 10; Best Local Similarity 41.3%; Pred. No. 5.8e+03; Matches 19; Conservative 13; Mismatches 14;
                                                                                                                          ; OTHER INFORMATION: nesting oligonucleotide US-10-628-109-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-908-975-15052/c
; Sequence 15052, Application US/09908975
; Publication No. US20030165843A1
; GENERAL INFORMATION:
LENGTH: 55
TYPE: DNA
ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens
US-09-908-975-15052
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE SOLUTIONS: 55

CORRESPONDENCE SUBSTESS:

ADDRESSEE: Flehr Hobbach Test Albritton & Herbert LLP STREET: Four Embarcadero Center, Suite 3400

CITY: San Francisco

CITY: San Francisco

CITY: United States

ZIP: 941.11-418

COMPUTER: United States

ZIP: 941.11-418

COMPUTER: TABDABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: READABLE FORM:

MEDIUM TYPE: COMPACINE PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/991,262

FILING DATE: 20-No. U320030041349A1-2001

CLASSIFICATION NUMBER: US/09/234,238

FILING DATE: 02-JAN-1999

APPLICATION NUMBER: US 08/485,355

FILING DATE: 12-MAY-1995

APPLICATION NUMBER: US 08/440,522

FILING DATE: 12-MAY-1995

APPLICATION NUMBER: US 08/089,372

APPLICATION NUMBER: US 08/089,372

APPLICATION NUMBER: US 08/089,372

FILING DATE: 12-MAY-1995

APPLICATION NUMBER: US 08/089,372

FILING DATE: 11-MAY-1995

APPLICATION NUMBER: US 08/089,372

FILING DATE: 10-MAY-1995

APPLICATION NUMBER: US 08/089,372

FILING DATE: 10-MAY-1995
                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                       47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 7, Application US/09991262
Publication No. US20030041349A1
GENERAL INFORMATION:
APPLICANT: Christian, P. D., Gordon, K. H.J., Hanzlik,
TITLE OF INVENTION: Insect Viruses and Their Uses in
Protecting Plants
                                                                                                                                                                                                                                                                                                Query Match
40.7%; Score 23.2; DB 17; Length
Best Local Similarity 38.6%; Pred. No. 7.8e+03;
Matches 17; Conservative 14; Mismatches 13; Indels
                                                                                                                                             NAME/KEY: allele
CCATION: 24
COTHER INFORMATION: 99-22706-367 : polymorphic base T or C
US-10-349-143-3088
                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGUCCACCUCGCGGGUNNNNNUGGGCAUGCCUUCGGGCAUG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                          44 GGTCCTCATCATAACACTGCRAAGTGGGCATTCTTACTCTCATG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Trecartin, Richard F.
REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: A-58631-3/RFT/DSS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: unknown

MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-991-262-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: 910 277299 INFORMATION FOR SEQ ID NO:
                                                     TYPE: DNA
ORGANISM: Homo Sapiens
SEQ ID NO 3088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-09-991-262-7
                                                                                                                       FEATURE:
                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
Query Match
Best Local Similarity 58.3%; Pred. No. 1.4e+04;
Best Local Similarity 58.3%; Pred. No. 1.4e+04;
Matches 14; Conservative 9; Mismatches 1; Indels 0; Gaps 0;
Qy 8 CCUCCUCGGCONNNNNUVGGCA 31
||:||:|||||:::::||||||
Db 16 CCTCCTCGCGCGCGCGCATGGCA 39
Search completed: March 15, 2005, 21:09:21
Job time: 373.25 secs
```

	std.
5.1.6	Compugen I
version	- 2005
GenCore	(c) 1993
	Copyright (

OM nucleic - nucleic search, using sw model

Run on:

March 15, 2005, 01:00:51; Search time 315.5 Seconds (without alignments) 1069.494 Million cell updates/sec

US-09-699-667E-61 57

Title: Perfect score:

1 ggguccaccuccucgcggun.....uucgcauggcuaagggaccc Sequence:

57

IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Scoring table:

4390206 segs, 2959870667 residues Searched:

8780412 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

N Geneseq 16Dec04:\*

1: geneseqn1990s:\*

3: geneseqn2000s:\*

4: geneseqn2001as:\*

5: geneseqn2001as:\*

6: geneseqn2001as:\*

7: geneseqn2001as:\*

9: geneseqn2003as:\*

9: geneseqn2003bs:\*

geneseqn2003cs:\* geneseqn2003ds:\* geneseqn2004as:\* geneseqn2004bs:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	uo.	Trans-act	Trans-act	Trans-act		Aaq46667 Substrate	Adq97183 Human can	Adr47040 Dengue vi	Adt48965 PCR prime	Primer HD	Sindbis/H	HDV rever	HDV riboz	Nested PC	Forward P	Nested PC	Reverse P	Reverse P	Nested pr	Hepatitis	Hepatitis	
	Description	Aaz57636	Aaz57637	Aaz57638	Aaz57639	146667	19718	1 <u>r</u> 4704(	t4896	Aaq86173	Aag86204	Aat31151	Aat30817	Aav42394	Aav42426	Aav60154	Aav60185	Aav70746	Aav70714	Aaz92930	Aaz92970	
	Des	Aaz	Aas	Aaz	Aaz	Aac	Ā	Ä	A	Aac	Aac	Aat	Aat	Aaı	Aaı	Aaı	Aaı	Aaı	Aaı	Aaz	Aaz	
IES																						
SUMMARIES	DI	AAZ57636	AAZ57637	4AZ57638	AZ57639	4AQ46667	ADQ97183	ADR47040	ADT48965	AAQ86173	AQ86204	AT31151	AT30817	AV42394	LAV42426	AV60154	AV60185	AV70746	AV70714	AZ92930	4AZ92970	
		6	3	m	۳ ۳	7	12	13	13	7	7	2	2	2	7	7	7	7	7	2	9	
	% Query Match Length DB	57	57	57	37	61	138627	48	48	51	52	52	52	52	52	52	52	52	52	52	52	
•	Query Match	100.0	100.0	83.2	62.1	55.8	53.7	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	
	Score	57	57	47.4	35.4	31.8	30.6	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	
	Regult No.	1	8	e	4	s	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	

WPI; 2000-096791/08.

Aaz92843 Hepatitis				Abk46276 HDV antig	Abk46316 Hepatitis	Adi30383 Hepatitis	Adi30423 Hepatitis	Adol3982 Eukaryoti	Adol3942 Eukaryoti	Adhl0551 Hepatitis	Aaq53138 Substrate	Aag53140 Substrate	Aaf28121 HDV riboz	Adr47033 Dengue vi	Aaq46665 Self-clea	Aaq46663 Self-clea		Aaf84035 EPO gene	Aaf84036 EPO gene	Abz82120 Hepatitis	Adp96249 HEP rabie	Abz82121 Hepatitis	Aan82174 Clone del	Adh10576 Nucleotid
AAZ92843	AAZ92803	AAL38850	AAL38810	ABK46276	ABK46316	2 ADI30383	2 ADI30423	12 ADO13982	2 ADO13942	2 ADH10551	AAQ53138	AAQ53140	AAF28121	3 ADR47033	AAQ46665	AAQ46663	AAX76586	AAF84035	AAF84036	ABZ82120	2 ADP96249	ABZ82121	AAN82174	2 ADH10576
52 3	52 3	52 6	52 6	52 6	52 6	52 1	52 1		52 1:	57 1	80 2	80 2	83 5	84 1	85 2	86 2	90 2	90 5	90 5	91 8	94 1	99 8	567 1	1369 13
53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
21	22	23	24	25	56	27	28	29	30	31	32	33	34	35	36	37	38	39	c 40	41	42	c 43	44	45
						_																		

## ALIGNMENTS

Trans-acting antigenomic delta ribozyme, deltaRzPl.1 nucleotide sequence. a "Forms double stranded region with bases 52-57" /\*tag= d 52.57 /\*tag= e /note= "Forms a double stranded region with bases 6-1" 1..6
/\*tag= a
/\*tag= a
7..19
/\*tag= b
20..25
/\*tag= b
/\*tag= b
/\*bound moiety= "SP1.1 substrate (AAZ57641) bases Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.1; 88. Perreault J, Ananvoranich S, Lafontaine D; Location/Qualifiers AAZ57636 standard; RNA; 57 BP. 99WO-CA000391. 98CA-02230203. (first entry) (UYSH ) UNIV SHERBROOKE. Key misc\_binding 29-APR-1999; 29-APR-1998; misc\_binding WO9955856-A2 05-APR-2000 misc\_binding 04-NOV-1999 Synthetic. stem\_loop AAZ57636; stem\_loop RESULT 1 AAZ57636 

5-11"

```
This is the nucleotide sequence of ribozyme deltaRzPl.1. This ribozyme cleaves substrate SPl.1 (see AAZS7641). The invention relates to a nucleic acid enzyme (e.g. deltaRzPl.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNXNNN-5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20. .25
/*tag= c
/bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUCCGACCUGGGGCGCUUCGCAUGGCUAAGGAACCC 57
                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
         New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.2; ss.
                                                                                                                                                                                                                                                                                                                                DB 3; Length 57;
                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                           Score 57; DB 3;
Pred. No. 3e-07;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                          Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                                                                100.08;
                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 89.5%;
Marches 51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57637 standard, RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= c
52. .57
/*tag= 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ...6
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7. .19
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                      8
```

```
This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme cleaves substrate SP1.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.2) that is constructed to have a cubstrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 6' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate sequence. The enzyme of the invention is used to cleave a substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme also have other therefore is not shown in the specification, but has been derived from the sequence is not shown in the specification, but has been derived from the cleavage round of the round from in figure 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /+tag= a
/note= "Forms double stranded region with bases 52-57"
/+tag= b
/+tag= c
/+tag= c
/+tag= c
/+tag= c
/+tag= c
/+tag= c
/-tag= c
/-tag= c
/-tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                             New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                               .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; ss. '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                              DB 3; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                               Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 57; DB 3; 89.5%; Pred. No. 3e-07; tive 6; Mismatches
                                               diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                            Example 1; Page; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ57638 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ъ
                                                                                                                                                                                                                                                                                                                                                                                                                             51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag≈
32. .57
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

ö

Gaps

;

```
This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to an ucleic acid enzyme (e.g. deltaRzPl.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Substrate; self-cleaving sequence; HDV; hepatitis delta virus; enzyme;
                                                                                                                                                                                                                                                      nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 3; Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= d
11. .13
/*tab= e III
/note= "forms duplex with region 21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= stem_II
/note= "forms duplex with region 52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
62.1%; Score 35.4; Di
Best Local Similarity 81.1%; Pred. No. 1.8;
Matches 30; Conservative 6; Mismatches
                                                                                                                                                                       Lafontaine
                                                                                                                                                                                                                                                                            diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Substrate-cleaving sequence ADC3.
                                                                                                                                                                                                                                                                                                                   Example 5; Fig 4; 52pp; English.
                                                                                                                                                                    Ananvoranich S,
                                         99WO-CA000391
                                                                                   98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ46667 standard; RNA; 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ಥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21. .23
/*tag= f
                                                                                                                             (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7. .10
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                            WPI; 2000-096791/08.
                                                                                                                                                                                                                                                      construction of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_structure
                                         29-APR-1999;
                                                                                   29-APR-1998;
                                                                                                                                                                    Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2003
13-JAN-1994
04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           duplex; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ46667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
AAQ46667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                         This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaZ2P1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) hase pairs to 6 nucleotides 3' to the cleavage site of the substrate of cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used coleave a substrate with the enzyme. The enzyme is used enzymes also have other therapeutic, biotechnological and disanostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /bound_moiety= "RzB fragment of bimolecular ribozyme" /notes= "Forms double-stranded region with bases 20-16 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /bound moiety= "Ribozyme substrate P1.1"
/note= "Forms double-stranded region with bases 11-6 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /bound molety= "RzB fragment of bimolecular ribozyme" /note=""Porms double-stranded region with bases 8-1 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                        New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 83.2%; Score 47.4; DB 3; Length 57; Best Local Similarity 78.9%; Pred. No. 0.00032; Matches 45; Conservative 6; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence of bimolecular ribozyme RzA fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; 8s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                         Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence AAZ57641"
                                                                                                                                                                                        Example 1; Fig 2; 52pp; English.
                                         Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ57639 standard; RNA; 37 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20. .25
(UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                 WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
misc_binding
                                         Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W09955856-A2
```

Synthetic

AAZ57639;

g ò

stem\_loop

AAZS7639
AAZS7639
AAZS7639
AAZS7639
AAZS7639
AAZSAX

ö

**Gaps** 

ö

Indels

.55

. 23 "

```
New isolated cancer associated nucleic acids comprising at least 10 contiguous nucleotides, useful for diagnosing, preventing and/or treating cancers such as leukemia and lymphoma.
                                                                                                                                                                                                                                                                                                                        The present invention relates to cancer associated sequences (ADQ97025-ADQ98004). The sequences are useful for the diagnosis, prevention and/or treatment of cancer, such as leukemia and lymphoma. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic formate directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 138627 BP; 33083 A; 34745 C; 35023 G; 35281 T; 0 U; 495 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cytostatic; virucide; dengue virus; recombinant replicon; deletion; d protein; C protein; NS1 protein signal; vaccine; cervical cancer; al disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ch 53.7%; Score 30.6; DB 12; Length 138627; 1 Similarity 49.1%; Pred. No. 4.5e+02; 26; Conservative 13; Mismatches 14; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TENGEN BIOMEDICAL CO.
BEIJING ORIENTAL TENGEN TECHNOLOGY DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 159; 199pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВР
                                                 22-DEC-2003; 2003WO-US041389.
                                                                                   27-DEC-2002; 2002US-00330773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JAN-2004; 2004WO-CN000088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JAN-2003; 2003CN-00115272.
                                                                                                                     SAGR-) SAGRES DISCOVERY INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADR47040 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                     Morris DW, Malandro MS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human papillomavirus
                                                                                                                                                                                     WPI; 2004-543781/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004072274-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-AUG-2004.
                 22-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADR47040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TENG-) 7
(BEIJ-) E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                preM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADR47040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The self-cleaving sequences from genomic and antigenomic HDV can be used to develop enzymatic RNA mols. with similar properties. ADC3 is a smaller version of ADC1 (AAQS3138), wherein stem IV is shortened. Such a smaller enzymatic RNA has simplified synthesis and the potential for higher enzymatic activity due to a higher probability that a small RNA will fold into an enzymatically active structure. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acid molecule having RNA substrate-cleaving enzymatic activity useful for cleaving specific target molecules in=vitro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  uccaccucedegennnnnngegeaugegegungeaugegeare se
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytostatic; Gene Therapy; cancer; leukemia; lymphoma; Human; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Length 61;
                   .13"
                                                                                                                                                                                                                                             .37"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human cancer associated sequence HD08-011, SEQ ID 159
label= stem_III
/note= "forms duplex with region 11.
24. .30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 61 BP; 10 A; 20 C; 19 G; 0 T; 12 U; 0 Other;
                                                     *tag= g
note= "RNA substrate binding region"
                                                                                                                                                                                         42. 45
/*tagg j
/label= stem_IV
/note=_"forms duplex with region 33.
                                                                                                                       /label= stem_IV
/note= "forms duplex with region 42.
                                                                                                                                                                                                                                                                             /*tag= c
/label= stem_II
/note= "forms duplex with region 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 31.8; D
Pred. No. 29;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perrota AT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 8; 55pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7183/c
ADQ97183 standard; DNA; 138627
                                                                                                                                                                                                                                                                                                                                                                                                                  93WO-US000292
                                                                                                                                                                                                                                                                                                                                                                                                                                                   92US-00821155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 77.4%;
Matches 41; Conservative
                                                                                                                                                                         ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Been MD, Rosenstein SP,
                                                                                                                                                                                       .45
                                                                                   33. .37
                                                                                                                                                       34. .45
                                                                                                                                                                                                                                                           . .55
                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1993-243233/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYDU-) UNIV DUKE
                                       misc structure
                                                                                       misc_structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-0CT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                 12-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-JAN-1992;
                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                               WO9314218-A1
                                                                                                                                                                                                                                                                                                                                                                                 22-JUL-1993
                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADQ97183;
```

SXCCCCCXXXXIXXXXXXXXXXXXXIXIIIIIIIIII

Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors

WPI; 2004-625870/60.

WO2004060304-A2

Homo sapiens

BXSXEXEXEXSX8X8

RESULT 6 ADQ97183/

a ð

ပ

ö

Gaps

57

```
8888888888888
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                              ઠે
                                                           A dengue virus recombinant replicon has a deletion of the complete coding sequence for prem protein of dengue virus and also includes elements of c.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of NS1 protein signal; coding regions of all non-structural proteins. The obtained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can efficiently express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a generapressing system using of the full-length dengue virus cDNA clone (PRS/FLD2). The recombinant virus vectors were transfected into baby haster kidney (BHK) cells to enable the screening of BHK-21 Tet-off cell innes. This sequence corresponds to an oligonucleotide used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Virucide; Japanese encephalitis B virus; bivalent vaccine; hepatitis B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                  53.3%; Score 30.4; DB 13; Length 48; 59.4%; Pred. No. 75; ive 12; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TENG-) TENGEN BIOMEDICAL CO. (BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD
like cervical cancer and viral diseases.
                                  Example 4; SEQ ID NO 37; 38pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                recombinant replicon of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADT48965 standard; DNA; 48 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCR primer 5' HDVr, seq id 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-MAR-2003; 2003CN-00115912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 59.4 tes 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-699719/68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2004082712-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCR; primer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-SEP-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADT48965;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The amplified DNA sequences were used in the construction of a eukaryotic layered vector initiation system (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence apable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that privial transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. 2003 to correct PN field.)
genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its self-replication function. The virus is useful in producing the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuated encephalitis B virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polo JM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                   Match 53.3%; Score 30.4; DB 13; Length 48; Local Similarity 59.4%; Pred. No. 75; les 19; Conservative 12; Mismatches 1; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Driver DA,
                                                                                                                                                                                                                  Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chang SM, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                   17 TCCACCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 2; Page 68; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВР.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93US-00122791
94US-00198450
                                                                                                                                                                        example from the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .5-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAQ86173;
                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAQ86173
```

φ

RESULT 10 AAQ86204

Matches

ò 셤

```
Primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 839-887. It was used with reverse primer HDV49-XC (AAT30850) for the PCR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SIN276-SPE (AAT31153), is used to amplify a fragment contg. Sindbis 5'-end sequences fused to HDV sequences. Overlapping synthesis is used in a second round of PCR using primers HDV49-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction region/Sindbis structural protein genes/Sindbis 3'-end untranslated region/ Gasignated pS5'-Ses. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                               Alphavirus; Sindbis virus; vector; gene therapy; vaccine; polymerase chain reaction; PCR; primer; hepatitis delta virus; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53.3%; Score 30.4; DB 2; Length 52; 59.4%; Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 7; Page 120; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polo JM, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP
                                                                                                                                                                                                                                                                                                                                                                                             95WO-US015490.
                                                                                                                                                                                                                                                                                                                                                                                                                                   94US-00348472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HDV ribozyme primer HDV17-68
                                                                                                                                                          HDV reverse primer HDV17-68
                                        AAT31151 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT30817 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                      ribozyme; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dubensky TW,
Belli BA;
                                                                                                                                                                                                                                                                                                                 WO9617072-A2
                                                                                                                                                                                                                                                                                                                                                                                               30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                   30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12-SEP-1996
                                                                                                                    12-SEP-1996
                                                                                                                                                                                                                                                                                                                                                        06-JUN-1996
                                                                                                                                                                                                                                                                          Synthetic.
                                                                             AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAT30817;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                      AAT3115;
                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequences given in AAQ86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are eukaryotic layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevents transcription of the variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polo JM;
                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                        Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jolly DJ, Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                               Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seguence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Pred. No. 76;
12; Mismatches
                                    53.3%; Score 30.4; I
59.4%; Pred. No. 76;
iive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59.4%; Score 30.4; 59.4%; Pred. No. 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chang SM,
                                                                                                                                                                                                                                                            ВÞ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93US-00122791
94US-00198450
                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 59.4<sup>1</sup>
Matches 19; Conservative
                                                         Local Similarity 59.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ibanez CE,
                                                                                                                                                                                                                                                          AAQ86204 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1995-131362/17
    BP; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9507994-A2
    Sequence 51
                                                                                                                                                                                                                                                                                                                                      25-MAR-2003
23-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                               AAQ86204;
                                          Query Match
```

Driver DA;

ö

Gaps

ö

Indels

ï

Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer;

```
AAV42426 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chang SMW, Ibanez CE,
                            Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON CORP
          (CHIR ) CHIRON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                          02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-MAR-1995
                            Chang SMW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            US5789245-A
                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                        AAV42426;
                                                                                                                                                                                                                                                                                                                    RESULT 14
                                                                                                                                                                                                                                                                                                                              AAV42426
 요
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                 primer SHDVIF (AAT30816) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDV17-68 (AAT30817) and reverse primer SHDV84R (AAT30818) to generate an HDV ribozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                       recombinant alpha-virus vectors - used to develop prods and methods use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                            Driver DA;
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                      53.3%; Score 30.4; DB 2; Length 52; 59.4%; Pred. No. 76;
                                                                                                                                                           Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                           1; Indels
polymerase chain reaction; PCR; ELVIS; ribozyme; HDV; hepatitis delta virus; ss.
                                                                                                                                                                                                                                                                                                                                      Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                       Nested PCR primer HDV17-68 of the invention.
                                                                                                                                                                                                                                                                                                                                                                          12; Mismatches
                                                                                                                                                           Polo JM, Ibanez CE,
                                                                                                                                                                                                                                   Example 3; Page 85; 256pp; English.
                                                                                                   94US-00348472.
95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                   95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-00741881
                                                                                                                                        (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                           19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV42394 standard; DNA;
                                                                                                                                                                                      WPI; 1996-277785/28
                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                           Dubensky TW,
                                             WO9617072-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-OCT-1998
                                                                                  30-NOV-1995;
                                                                                                     30-NOV-1994;
                                                                                                             18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-0CT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
15-MAR-1995;
                                                                06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US5789245-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-AUG-1998
                            Synthetic
                                                                                                                                                                    Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV42394;
                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                        New
                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                             Š
```

```
pCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytocoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                DNA alpha:virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA alpha:virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
Polo JM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCR primers AAV42367-420 and AAV42422-54 are used in the course of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA alphavirus; structural protein expression; inhibit; pathogen;
immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
   Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
53.3%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 76;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                  recombinant alpha: virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           recombinant alpha: virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 7; Col 103; 140pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jolly DJ,
   Jolly DJ,
                                                                                                                                                                                                                               Example 3; Col 69; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-00741881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Forward PCR primer HDV17-68
```

ó;

```
ô
invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryotic layered vector initiation system; stimulate; immune response;
Sindbis; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                  DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                               Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                            1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky TW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                  53.3%; Score 30.4; C 59.4%; Pred. No. 76; iive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 3; Col 71-72; 144pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV60154 standard; DNA; 52 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-0073915B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93US-00122791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                            19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POLO J M.
DUBENSKY T W.
JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-FEB-1994;
14-SEP-1994;
30-NOV-1994;
18-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LS-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV60154;
                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POLO/) 1 (DUBE/) 1 (JOLL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
AAV60154
1D AAV60154
                                                                                                                                                                                                                                                                                                                                                                                              Matches
        $$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
```

PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral cDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral cDNA. The RNA comprises a vector construct which autonomously amplifies in the

```
cell and expresses a heterologous nucleic acid sequence which encodes an
              antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I restricted or an HLA class II restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                          52;
                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                       DB 2; Length
                                                                                                                                                                             Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                          1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                       53.3%; Score 30.4; D
59.4%; Pred. No. 76;
cive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                               Search completed: March 15, 2005, 11:20:07 Job time: 319.5 secs
                                                                                                                                                                                                                                                                      19; Conservative
                                                                                                                                                                                                                            Query Match
Best Local Similarity
888888888888
                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                           셤
```

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

- nucleic search, using sw model OM nucleic Run on:

March 15, 2005, 10:18:52 ; Search time 94.5 Seconds
(without alignments)
986.961 Million cell updates/sec

US-09-699-667E-61 57

57

1 ggguccaccuccucgcggun.....uucgcauggcuaagggaccc IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Title: Perfect score: Sequence: Scoring table:

1202784 segs, 818138359 residues Searched:

2405568 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 200000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Issued Patents NA:\*

(cgn2\_6/ptodata/1/ina/5A COMB.seq:\*

(cgn2\_6/ptodata/1/ina/5B COMB.seq:\*

(cgn2\_6/ptodata/1/ina/6A COMB.seq:\*

(cgn2\_6/ptodata/1/ina/BCTUS COMB.seq:\*

(cgn2\_6/ptodata/1/ina/PCTUS COMB.seq:\*

(cgn2\_6/ptodata/1/ina/PCTUS COMB.seq:\*

(cgn2\_6/ptodata/1/ina/PCTUS COMB.seq:\* . .. .. 6 .. .. Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

STIMMARTES

		Appl	Appl	Appl	Appl	Appl	Appl	Appl	App1	Appl	Appl	Appl	Appl	App1	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appli	Appli	Appl	Appl	5225337	25337	Appl
	Ę	18,	40,	80,	40,	80,	40,	80,	40,	80,	40,	80,	40,	80,	40,	80,	16,	12,	12,	13,	14,	ģ	7	•	13,	25	22	25,
	Description	nce i	nce	nce	nce	nce	nce	nce	nce	nce	nce	nce	nce	nce	nce	gge	nce	ge	nce	ice	oce	nce	nce	nce	nce	Š.	8	ace
	cri	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Patent	Patent	Sequence
	Дев	Se	Se	Se	S	Se	Se	Se	S	S	S	Se	Se	Se	Se	S	Se	Se	Se	S	Se	Se	Se	Se	Se	Pat	Pat	Se
		-18	0	ဓ္ဏ	0	ဓ္ဓ	<del>0</del>	ဓ္ဓ	0	8	0	90	0	8	-40	-80	-16	12	-12	-13	-14	٩	~	2	23			-25
ŭ		63A	81-1	-881-8	58-	58-1	67-	67-1	96-	-796-80	-69	69-1	99-1	99-1	40A	40A	63A	95-	053	63A	63A	63A	37-;	42-	042-			19B
AKI		-238-963A-1	41-8	41 - 8	39-1	39-1	39-1	39-1	04-7	04-7	31-8	31-8	50-3	50-3	36-1	36-1	38-9	46-6	90-9	38-9	38-9	38-9	54-3	33-0	1	~	7	-553-619B-25
SUMMARIES		08-2	US-08-741-881-4	8-741	US-08-739-158-4	US-08-739-158-80	08-739-167-4	US-08-739-167-80	US-08-404-796-40	US-08-404	US-08-931-869-40	US-08-931-869-80	US-09-350-399-40	US-09-350-399-80	US-09-236-140A-40	US-09-236-140A-80	US-08-238-963A-16	US-08-646-695-12	PCT-US96-06053-	US-08-238-963A-1	US-08-238-963A-14	US-08-238-963A-6	US-09-554-337-2	US-09-733-042-	US-09-733	5225337-2	337	8-5
,,	8	us-c	us-c	US-0	ns-c	US-C	us-c	SS.	ns-c	Sn.	ns-c	ns-c	ns-c	ns-c	us-c	us-c	us-c	Sn.	Ę	us-c	SS-S	ns-c	Sn-Sn	Sn-Sn	us-c	5225	5225337-2	US-08
	DB	-	٦			-	N	~	m	ო	М	ო	m	ო	m	m	н	ო	S	н	-	-	4	4	4	9	9	N
	th	61	25	25	25	25	25	25	25	25	25	22	25	22	25	25	80	83	83	84	84	98	90	90	9	101	101	0.5
	Query Match Length DB																									_	_	_
	Query	5.8	ж .Э	.3	3.3		3.3	3.3		 	3.3	3.3	3.3	3.3	ن س	3.3	3.3	ж Э.Э		m.	3.3	 	 	 	 	3.3	ж Э.Э	т. Э
d	gg.	55	Š	'n	53	53	53	'n	ķ	53	'n	53	23	53	'n	23	53	23	'n	iń	53	53	'n	53	23	23	ìń	ιά
	Score	31.8	30.4	30.4	30.4	30.4	4.0	4.	9.4	30.4	4.0	0.4	4.	4.0	4.	4.0	4.	4.0	4.	4.	30.4	30.4	4.	4.	30.4	4.0	0.4	4.0
	Š	m	m	m	m	m	m	ñ	ń	m	m	ń	ń	m	ń	m	m	m	m	ñ	ń	m	m	m	ñ	m	m	ñ
	ult.	-4	7	М	4	Ŋ	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27
	Result No.																								υ			v

ä

Gaps 4.

Ouery Match 55.8%; Score 31.8; DB 1; Length 61; Best Local Similarity 77.4%; Pred. No. 3; Matches 41; Conservative 6; Mismatches 2; Indels

TOPOLOGY: US-08-238-963A-18

Sequence 30, Appli Sequence 1, Appli Sequence 350, Appli Sequence 350, Appli Sequence 350, Appli Sequence 350, Appli Sequence 350, Appli Sequence 350, Appli		
US-08-553-619B-30 US-09-554-337-4 US-08-646-695-1 US-08-646-695-1 PCT-US96-06053-1 PCT-US96-06053-7 US-09-554-37-1 US-09-949-016-14046 US-09-949-016-14046 US-09-914-951A-1 US-09-914-016-5120 US-09-914-016-5120 US-09-949-016-5120 US-09-949-016-3570 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586 US-09-949-016-3586	ALIGNMENTS	nus/08238963A  thael D.  n, Sarah P.  Anne T.  ENZYMATIC RNA MOLECULES 21 SS: SS: SS: SS: SS: SS: SS: SS: SS: SS
1005 143310 144311 144311 144311 1600 1600 1600 1600 1600 1600 1600 1		US-08-963A-18 US-08-963A-18 US-08-38-963A-18 Sequence 18, Application US/08238963A Patent No. 5625047 GENERAL INFORMATION: APPLICANT: Been, Michael D. APPLICANT: Rosenstein, Sarah P. APPLICANT: Perrotta, Anne T. TITLE OF INVENTION: ENYMATIC RNA MO NUMBER OF SEQUENCES: 21 CORRESPONDENCES: 21 CORRESPONDENCE ADDRESS: ADDRESSEE: Lyon & Lyon STREET: 613 West Fifth Street STREET: 613 West Fifth Street STREET: Galifornia COUNTRY: U.S.A. ZIP: 90071-2066 COMPUTER: READABLE FORM: MEDIUM TYPE: 3.5 Diskette, 1.44 M MEDIUM TYPE: 3.5 DISKETER STEAM STE
		A-18 FORMATION TT: ROBENSE TO THE PERFORMATION: TT: PERFORMED TO THE TYPE: 3.5." TYPE: 3.
		ULT 1  08-238-963A-18  cquence 18, Application US, GEDERAL INFORMATION: APPLICANT: Been, Michae, APPLICANT: Been, Michae, APPLICANT: Been, Michae, APPLICANT: Perrotta, An TITLE OF INVENTION: ENZ. 21 CORRESPONDENCES: 21 CORRESPONDENCES: 21 CORRESPONDENCES: 21 CORRESPONDENCES: 21 CORRESPONDENCES: 31 West Fift; STREET: 613 West Fift; STREET: MBDIUM TYPE: 3.5" Dis MEDIUM TYPE: 3.5" DIS MED
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RESULT US-SOGUE, US-SOGUE, SOGUE, RESULT GENN AN A
		_ KD

```
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TOPOLOGY: linear US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:

APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver. David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCUUCGCAUGGCUAAGGGACC 56
                                                  53.3%; Score 30.4; DB 1; Length 52;
59.4%; Pred. No. 8.2;
tive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
CLASSIPICATION NUMBER: 33,963
ATTORNEY AGENT INFORMATION:
NAME: MCMBSTEAT DAVID D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION SEQ ID NO: 40:
SEQUEDRES
SEQUEDRES
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 6300 Columbia Center, 701 Fifth Avenue CITY: Seattle STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                   Sequence 40, Application US/08741881
Patent No. 5789245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 80, Application US/08741881
Patent No. 5789245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
US-08-741-881-80
                                                                                                                                       RESULT 2
US-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                          ò
```

```
CORRESORDERS RESERVED AND RESER
```

```
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-739-167-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-739-167-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 80, Application US/08739158
Patent No. 5814482
GENERAL INFORMATION:
APPLICANT:
Pubcnenky Jr, Thomas W
APPLICANT:
Pubcnenky Jr, Thomas W
APPLICANT:
Pubcnenky Jr, Thomas W
APPLICANT:
APPLICAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                     Query Match 53.3%; Score 30.4; DB 1; Length 52; Best Local Similarity 59.4%; Pred. No. 8.2; Matches 19; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: Floppy disk
COMPUTER: PC-OMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,158
FILING DATE: 30-OCT-1996
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: MCMORAGERET: David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D3 / 1146.012
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPAS: (206) 622-6931
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rccaccrccrcccccaccrcccarccc 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53.3%; Score 50...;
59.4%; Pred. No. 8.2;
rive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 40, Application US/08739167
    (206) 622-4900
                                        TELEFAX: (206) 682-6031
INPORMATION POR SEQ 1D NO: SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 59.4%
Best Local 19; Conservative
                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                         ; TOPOLOGY: linear
US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: US
TELEPHONE:
TELEFAX: (:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
US-08-739-167-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
Patent No. 5843723
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Polo, John M.
APPLICANT: Polo, John M.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Belli, Barbara A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSES: SEED and BERRY LLP
                         APPLICANT: Polo, John M.
APPLICANT: Lbanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Belli, Barbara A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
CORRESPONDENCES: ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY AGENT INFORMATION:
NAME: MCMASters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C7 / 1146.008
TELECOMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
IELEPHONE: (206) 622-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARRACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435_____
                                                                                                                                                                                                                                                                    3: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       53.3%; Score 30.4; I
59.4%; Pred. No. 8.2;
tive 12; Mismatches
Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                             STREET: 6300 Colum
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98104-7092
```

```
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 630°
CITY: Scattle
STATE: Washington
COUNTRY: US
7TP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                            ;
TOPOLOGY:
US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: Washington
COMPUTEX: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 15-MAR-1995
CLASSIFICATION: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMSETERE MCDACKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY AGENT INFORMATION:

NAME: McMasters David D.

REGISTRATION NUMBER: 33,963

REFERENCE TOOKET NUMBER: 930049.423C7 / 1146.008

TELECOMMUNICATION INFORMATION:

TELEPRIONE: (206) 622-490

TELEPRIONE: (206) 622-631

INFORMATION FOR SEQ ID NO: 80:

SEQUENCE CHARACTER.STICS:

LENGTH: 52 base pairs

TEREPRIONE CLARACTER.STICS:

SEQUENCE CHARACTER.STICS:

SEQUENCE CHARA
COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53.3%; Score 30.4; E 59.4%; Pred. No. 8.2; ative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 40, Application US/08404796
Fatent No. 6015686
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Orly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TILLE OF INVENTION: BUKRYOTIC LAYER
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: linear
US-08-739-167-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Danez, Carlos E.
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Dily, Douglas J.
APPLICANT: Dily, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 52;
Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
ATTORNEY AGENT INFORMATION:
NAME: MCMBETERS, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
                                                1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 3;
DB 3;
                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 recacerceredesereceaecressearces 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 53.3%; Score 30.4; Di
Best Local Similarity 59.4%; Pred. No. 8.2;
Matches 19; Conservative 12; Mismatches
53.3%; Score 30.4; D
59.4%; Pred. No. 8.2;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
US-08-931-869-40
; Sequence 40, Application US/08931869
; Patent No. 6015694
; GENERAL INFORMATION:
; APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                 Sequence 80, Application US/08404796
Patent No. 6015686
Query Match
Best Local Similarity 59.49
Matches 19; Conservative
```

```
COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (206) 682-1
INFORMATION FOR SEQ ID NO: 40
SEQUENCE CHARACTERISTICS
Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 80. Application US/08931869
Patent No. 6015694
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Tolang, Stephen M.W.
APPLICANT: Tolang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Jolly, Douglas J.
APPLICANT: Jolly, Barbara A.
TILLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                    APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF.INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53.3%; Score 30.4; DB 3; Length 52;
59.4%; Pred. No. 8.2;
ttive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                    SIKEET: 6430 COLUMDIA CENTER, 701 FILTH AVENUE
CITY: 8430 COLUMDIA CENTER, 701 FILTH AVENUE
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER: ISABBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTOMASTERIAL INFORMATION:
NAME: MCAMBER: 33,963
REGISTRATION NUMBER: 30,0049,423CS / 1146.006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206,622-4900
TELEFAX: (206,622-4900
TELEFAX: (206,622-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                  Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: US
                                                                                                                                                                                                             ADDRESSEE:
STREET: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
US-08-931-869-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-931-869-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
GENERAL INFORMATION:
Discrete Paris W
Polo, John M.
Jolly, Douglas J.
TITLE OF INVENTION: EUKRRYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CORPUTER: DATENTIN PC compatible
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-311-1999
CLASSIFLATION:
ATTORNEY/AGENT INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REPERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
PILING DATE: 16-SEP-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMASICAET NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION INFORMATION:
TELEPHONE: (206) 622-490
TELEFRX: (206) 622-490
TELEFRX: (206) 622-490
SEQUENCE CHARACTERISTICS:
LENGTH: 52 Dase pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCACCTCCTGGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
53.3%; Score 30.4; Di
Best Local Similarity 59.4%; Pred. No. 8.2;
Matches 19; Conservative 12; Mismatches
```

```
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                ö
                                                                                           Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 52,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: MCMASTERS, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Seattle
STATE: Washington
COUNTRY: Bashington
COMPUTER READABLE FORM:
MEDIUM TRYER: Floppy disk
COMPUTER: PR PC COMPAtible
COMPUTER: PA PC COMPATIBLE
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 3;
                                                                                           DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53.3%; Score 30.4; D 59.4%; Pred. No. 8.2; ive 12; Mismatches
                                                                                         Score 30.4; L
Pred. No. 8.2;
                                                                                                                              12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
REPLICATION NUMBER: US/09/350,399
FILING DATE: 08-Jul-1999
CLASSIFICATION: <UNKNOWN>
                   TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; SEQUENCE DESCRIPTION: SEQ ID NO: 80:
US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Dubensky Jr, Thomas W Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 40, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                             Sequence 80, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: single
                                                                                         53.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.48
                                                                                       Query Match
Best Local Similarity 59.49
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
US-09-236-140A-40
                                                                                                                                                                                                                                                            RESULT 13
US-09-350-399-80
                                                  US-09-350-399-40
                                                                                                                                                                     ઠે
                                                                                                                                                                                                    셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polo, John M.
Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                     COMPUTATE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPRONE: (949) 823.6000
TELEFRAX: (949) 823.6100
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 840 NEWPORT CENTER DRIVE, SUITE 700 CITY: NEWPORT BEACH STREET: CALIFORNIA COUNTRY: US
                                                                                                                                                                                     ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
STATE: CALIFORNIA
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53.3%; Score 30.4; DB 3;
59.4%; Pred. No. 8.2;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: «Unknown»
ATTORNEY/AGENT INFORMATION:
NAME: CUllman, Louis C.
REGISTRATION NUMBER: 39,645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 80, Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                   ZIP: 92660
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 59.49
Matches 19; Conservative
```

Search completed: March 15, 2005, 15:26:33 Job time : 96.5 secs

THIS PAGE BLANK (USPTO)

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

- nucleic search, using sw model OM nucleic Run on:

March 15, 2005, 10:59:13 ; Search time 376.5 Seconds (without alignments) 900.574 Million cell updates/sec

US-09-699-667E-61 57 Title: Perfect score:

1 ggguccaccuccucgcggun.....uucgcauggcuaagggaccc Sequence:

Scoring table:

5537552 segs, 2974263231 residues IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Searched:

11075104 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Published\_Applications\_NA:\* Database :

PUDLISHER APPLICATION NATION TO THE COME SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US07 PUBCOMB SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US06 FUBF PUB SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US06 FUBF PUB SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US07 NEW PUB SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US07 NEW PUB SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US09 PUBCOMB SEQ: \*

(cgn2\_6/ptodata/1/pubpna/US10 PUBCOMB SEQ: \*

(cgn2\_6/ptodata/1

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

	Description	Sequence 6796, Ap	Sequence 40, Appl	Sequence 80, Appl	Sequence 40, Appl	Sequence 80, Appl	Sequence 12, Appl	Sequence 13, Appl	Sequence 2, Appli	Sequence 7, Appli	Sequence 8, Appli	Sequence 6, Appli
	ID	US-10-767-701-6796	US-10-346-880-40	US-10-346-880-80	US-10-150-407-40	US-10-150-407-80	US-09-733-042-12	US-09-733-042-13	US-09-190-246-2	US-10-237-302-7	US-10-237-302-8	US-10-485-281-6
	1 DB	18	17	17	11	117	6	6	10	15	15	18
	Length	470	52	52	52	25	8	8	8	91	66	5451
æ	Query e Match Length DB I	54.4	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
	Score.	31	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
	Result No.	-	~	m	4	S	y	0	æ	σ	c 10	11

Sequence 4, Appli Sequence 1, Appli Sequence 17177, A	10	Sequence 6, Appli		Sequence 515, App						7	Sequence 3, Appli		202											ä	n	Sequence 39, Appl	e o	ŝ	Sequence 32, Appl
-09-190- -09-190- -10-719-	39-918-995 39-918-995	10-109-860-6	0-437-963-86	US-10-1/2-118-515 US-10-342-887-515	10-772-636-53	-10-109-860-	10-437-963-86	10-1	75-20	$\sim$	US-10-633-423-3	US-10-427-741-3	US-10-723-860-2007	US-10-482-029-165	-09	US-10-109-860-3	æ	US-10-719-993-6946	93-68	US-10-029-386-4237	61-1	US-10-260-238-1175	S US-10-156-761-1	US-09-845-583-1	US-10-037-182-3	US-09-507-362-39	141-39	-10-425-115-5	US-10-047-825-32
10 10 18	100	13	1 6	11	13	13	18	15	11	11	18	18	18	19	18	13	18	18	18	16	15	17	15	σ	_	10	_	_	14
8100 15538 201	466	601	1177	1415	1415	1445	1564	3386	3386	3386	3386	3386	3386	3386	3421	9704	22297	115755	366803	564	2730	3300	9025608	11009	11009	26	26	586	1170
53.3 53.3			52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	S	S	w	S	LO.	S	m	σ	S)	σ,	S	S	σ	50.9	σ.	50.9
30.4 30.4 30	9 0 9 0	000	0 0	0 0	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29.8	29.6	29.6	29.6	29.4	29.4	29	53	29	29
13	15	11	8 5	2 5	21	22	23	24	25	56	27	28	53	30	31	32	33	34	35	36	37	38	39		41	42	43	44	45
	υυ	U	U I	ט ט	υ	υ	υ	υ	υ	υ	υ	υ	U	υ	υ	υ		υ		υ		υ						υ	

## ALIGNMENTS

```
Sequence 6796, Application US/10767701
Sequence 6796, Application US/10767701
Sequence 6796, Application Wo. US20040172684A1
GENERAL INFORMATION:
BAPLICANT: Kovallc, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
FILE REFERENCE: 38-21(53535)B
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 63128
SEQ ID NO 6796
LENGTH: 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Сарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 54.4%; Score 31; DB 18; Length 470; Best Local Similarity 49.1%; Pred. No. 21; Matches 27; Conservative 13; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , OTHER INFORMATION: Clone ID: SORBI-28MAY03-CLUS55297_1
US-10-767-701-6796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Sorghum bicolor
US-10-767-701-6796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
```

RESULT 2 US-10-346-880-40 ; Sequence 40, Application US/10346880 셤

1 GGGUCCACCUCCCCCGCGUNNNNNUGGGCAUGCGGCUUCGCAUGGCUAAGGGAC 55

ò

ö

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polo, John M.
Jolly, Douglas J.
Driver, David A.

TITLE OF INVENTION: BYCKRYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
, OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68
US-10-346-880-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53.3%; Score 30.4; DB 17; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIFCATION: UNKNOWN>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-011-199
ATTORNEY/AGENT INFORMATION:
NAME: MCMARTER: David D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53.3%; Score 30.4; D
59.4%; Pred. No. 28;
tive 12; Mismatches
                         PRIOR APPLICATION NUMBER: 08/348,472
PRIOR FILING DATE: 1994-11-30
PRIOR FILING DATE: 1994-02-18
PRIOR APPLICATION NUMBER: 08/122,791
PRIOR FILING DATE: 1993-09-15
NUMBER OF SEQ ID NOS: 128
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
TOPOLOGY: linear
;
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
US-10-150-407-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Dubensky Jr, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-150-407-40; Sequence 40, Application US/10150407; Publication No. US20040029278A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (206) 682-4
INFORMATION FOR SEQ ID NO: 40.
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 59.44
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3

US-10-346-880-80

Sequence 80, Application US/10346880

Sequence 80, Application US/10346880

Sequence 80, Application US/10346880

SEQUENCEMAL INFORMATION:

APPLICANT: Discourse Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                  GENERAL INFORMATION:
APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Deanez, Carlos E
APPLICANT: Deanez, Carlos E
APPLICANT: Clang, Stephen M.W.
APPLICANT: Driver, David A
APPLICANT: Driver, David A
APPLICANT: Belli, Barbara A
APPLICANT: Belli, Barbara B
APPLICANT: Belli, Barbara B
APPLICANT: Briver, David A
APPLICANT: Belli, Barbara B
APPLICANT: Bolli, Barbara B
APPLICANT: BON NUMBER: 09/503,138
PRIOR PILING DATE: 2000-02-11
PRIOR APPLICATION NUMBER: 09/191,747
PRIOR PILING DATE: 1998-11-125
PRIOR PILING DATE: 1998-11-125
PRIOR PLING DATE: 1998-11-125
PRIOR PELING DATE: 1995-01-18
PRIOR APPLICATION NUMBER: 08/404,796
PRIOR APPLICATION NUMBER: 08/36,184
PRIOR APPLICATION NUMBER: 08/196,450
PRIOR PELING DATE: 1994-11-30
PRIOR PELING DATE: 1994-02-18
PRIOR PELING DATE: 1995-01-18
PRIOR PELING DATE: 1994-02-18
PRIOR PELING DATE: 1994-02-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; FEATURE:
; OTHER INFORMATION: Artificial sequence: nested primer HDV17-68
US-10-346-880-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
53.3%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 28;
Matches 19; Conservative 12; Mismatches
No. US20030232035A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Unknown
```

셤

us-09-699-667e-61.std.rnpb

```
CURRENT FILING DATE: 2000-12-11
PRIOR APPLICATION NUMBER: US 60/169,988
PRIOR FILING DATE: 1999-12-10
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patentin version 3.0
SEQ ID NO. 12
LENGTH: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 13, Application US/09733042 Patent No. US20020168709A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Semliki Forest virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 59.43
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                        TYPE: DNA
ORGANISM: HDV-FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: HDV-REV
                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-733-042-13/c
                                                                                                                                                                                 US-09-733-042-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-733-042-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-09-190-246-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-190-246-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                        Sequence 80, Application US/10150407
Publication No. US20040029278A1
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
POLO, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUGHARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 12, Application US/09733042
Patent No. US20020168709A1
PAPENT NIVERMATION:
APPLICANT: Hennecke, Frank
APPLICANT: Renner, Wolfgang A.
TITLE OF INVENTION:
PILE REFERENCE: 1700.0100001
                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 17; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: MCMGGEER, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: BM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                     1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 53.3%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 28;
Matches 19; Conservative 12; Mismatches
  Best Local Similarity 59.4%; Pred. No. 28; Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/350,522
FILING DATE: 08-Jul-1999
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIPICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/733,042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5) 622-4900
682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (206) 682-6
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: Washington COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Seattle
                                                                                                                                                          RESULT 5
US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
US-09-733-042-12
                                                                                            g
                                                              ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                               Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09190246

Publication No. US20030180257A1

GENERAL INFORMATION:

APPLICANT: Parrington, Mark

APPLICANT: Li, Xiaomao

TITLE OF INVENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES

FILE REPERENCE: Parrington et al.;

CURRENT APPLICATION NUMBER: US/09/190,246

CURRENT FILING DATE: 1998-11-13

NUMBER OF SEQ ID NOS: 7

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 2

LENGTH: 90
                                                                                                                                                                                                                                                                                                              APPLICANT: Hennecke, Frank
APPLICANT: Hennecke, Frank
APPLICANT: Hennecke, Wolfgang A.
TITLE OF INVENTION: Replicon Based Activation of Endogenous Genes
TILE REPERENCE: 1700.0100001
CURRENT APPLICATION NUMBER: US/09/733,042
CURRENT FILING DATE: 2000-12-11
PRIOR PAPLICATION NUMBER: US 60/169,988
PRIOR FLING DATE: 1999-12-10
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patentin version 3.0
SSQ ID NO 13
LENGTH: 90
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53.3%; Score 30.4; DB 9; Length 90; 59.4%; Pred. No. 30;
  DB 9; Length 90,
                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 53.3%; Score 30.4; DB 10; 1. Similarity 59.4%; Pred. No. 30; 19; Conservative 12; Mismatches 1;
                                               ij
                                                                                                                       22 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 53
                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 TCCACCTCCTCGCGTCCGACCTGGCCATCCG 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
Query Match
53.3%; Score 30.4; D:
Best Local Similarity 59.4%; Pred. No. 30;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12; Mismatches
```

Gaps

;

Indels

```
12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-190-246-1
; Sequence 1, Application US/09190246
; Publication No. US20030180257A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Semliki Forest virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 59.4%
19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 8100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
US-09-190-246-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-190-246-4
   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                         ઠ
                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 15; Length 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 15; Length 99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Description of Artificial Sequence; NOTE; OTHER INFORMATION: Synthetic Construct
US-10-237-302-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Description of Artificial Sequence; NOTE OTHER INFORMATION: Synthetic Construct
                                                                                                                                                                                                                                                             US-11-21-21-31-21

US-11-21-21-31-21

US-11-21-21-31-21

US-12-21-31-21

US-12-21-31-21

US-12-21

US-12-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Alphavax, Inc.
APPLICANT: Jonathan F. Smith
APPLICANT: Kurt I. Kamrud
APPLICANT: Grant I. Kamrud
APPLICANT: Granthan O. Rayner
APPLICANT: Sergey A. Dryga
APPLICANT: Ian J. Caley
TITLE OF INVENTION: ALPHAVIRUS REPLICON VECTOR SYSTEMS
FILE REFERENCE: 01113.0002uz
CURRENT APPLICATION NUMBER: US/10/237,302
CURRENT FILING DATE: 2002-09-06
                                                                             22 TCCACCTCCTCGCGTCCGACCTGGGCATCCG 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18 TCCACCTCCTCGCGTCCGACCTGGGCATCCG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 53.3%; Score 30.4; I
Best Local Similarity 59.4%; Pred. No. 30;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 30.4;
Pred. No. 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/317,722
PRIOR FILING DATE: 2001-09-06
NUMBER OF SEQ ID NOS: 49
SEQ ID NO 8
LENGTH: 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Application US/10237302
Publication No. US20030119182A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
US-10-237-302-8/c
                                                                                                                                                                                                                                                     US-10-237-302-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                        ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6, Application US/10485281
; Sequence 6, Application US/20040265821A1
; Sequence 6, Application No. US20040265821A1
; GENERAL INFORMATION:
; APPLICANT: Sandig, Volker
; APPLICANT: Jordan, Ingo
; TITLE OF INVENTION: RNA Amplification System Using Plant Components in TITLE OF INVENTION: Animal Cells
; TITLE OF INVENTION: Animal Cells
; TITLE OF INVENTION: Animal Cells
; FILE REPRENCE: 040026us/JH
; CURRENT APPLICATION NUMBER: US/10/485,281
; FILE REPERENCE: 2004-01-29
; PRIOR FILING DATE: 2004-01-29
; PRIOR FILING DATE: 2002-0-29
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Description of Artificial Sequence: Vector plJO-79
US-10-485-281-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Sequence 4, Application US/09190246 |
| Sequence 4, Application US/09190246 |
| Publication No. US20030180257A1 |
| GENERAL INFORMATION: |
| APPLICANT: Partington, Mark |
| APPLICANT: Li, Xiaomao |
| TITLE OF INVENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES |
| FILE REFERENCE: Partington et al. |
| CURRENT FILING DATE: 1998-11-13 |
| NUMBER OF SEQ ID NOS: 7 |
| SEQ ID NO 4 |
| SEQ ID NO 5 |
| SEQ ID N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 5451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 8100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 53.3%; Score 30.4; DB 10; Best Local Similarity 59.4%; Pred. No. 41; Matches 19; Conservative 12; Mismatches 1;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S002 TCCACCTCCTCGGGGTCCGACCTGGGCATCCG 5033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53.3%; Score 30.4; D
59.4%; Pred. No. 40;
tive 12; Mismatches
```

us-09-699-667e-61.std.rnpb

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
US-10-719-993-17177
Sequence 17177, Application US/10719993
Sequence 17177, Application US/10719993
Sequence 17177, Application US/20040265849A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29 GGGACGCCCACCTCGCGGCGAGAGTGGGGCAGGAGGCTGAGGAAGGGTACTGGA 82
                  APPLICANT: Parrington, Mark
APPLICANT: Li, Xiaomao
CURRENT PRIJON NUMBER: US/09/190,246
CURRENT PILING DATE: 1980-11-13
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 15538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCGGCUUCGCAUGGCUAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 15538;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
52.6%; Score 30; DB 18; Length 201;
Best Local Similarity 55.6%; Pred. No. 43;
Matches 30; Conservative 9; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
US-09-918-95-2716/c
; Sequence 2716, Application US/09918995
; Publication No. US20030073623A1
; GENERAL INFORMATION:
; APPLICANT: Hyseq, Inc.
; TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
; FILE REFERENCE: 20411-756
; CURRENT APPLICATION NUMBER: US/09/918,995
; CURRENT PILING DATE: 1999-100,000
; PRIOR FILING DATE: 1999-01-20
; NUMBER OF SEQ ID NOS: 38054
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2716
; LENGTH: 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12479 TCCACCTCGCGGTCCGACCTGGGCATCCG 12510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 53.3%; Score 30.4; D
Best Local Similarity 59.4%; Pred. No. 43;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
; ORGANISM: Semliki Forest virus
US-09-190-246-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo Bapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-719-993-17177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

```
Gaps
                                                                                                                                                                                                 ö
                                                                                                                                    Query Match 52.6%; Score 30; DB 10; Length 466; Best Local Similarity 50.0%; Pred. No. 46; Matches 23; Conservative 13; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                     99 GGGTGCTCCTCCTCGGGACCCTTGCTGATCATGGCGCTGCGCGTGG 54
                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGGCUUCGCAUGG 46
                                                                                                                                                                                                                                                                                                                                                                                          Search completed: March 15, 2005, 15:51:51
Job time : 383.5 secs
; NAME/KEY: misc_feature
; LCCATION: (1)...(466)
; OTHER INFORMATION: n = A,T,C or G
US-09-918-995-2716
```

THIS PAGE BLANK (USPTO)

¥

```
1 ggguccaccuccucgcggun......cgggcauggcuaagggaccc 57
                                                                                                                                                                                                                                                                     241816
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                        34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                      - nucleic search, using sw model
                                                                                                                                                                                             IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                US-09-699-667E-62
57
                                                                                                                                                                                                                                                                                                                                                                                                           9b_est1:

9b_htc:

9b_est4:

9b_est4:

9b_est6:

9b_gs81:

9b_gs81:
                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                EST:*
                                                                                                                                      Title:
Perfect score:
Sequence:
                                                                                                                                                                                             Scoring table:
                                                       OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                        Searched:
                                                                                   Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES	DB ID Description	232965 AA232965	1 AA878748 Of85b02.8	8 BH638481 1008022G0	8 BH413716 BH413716 1007034B0		1 AI956143 AI956143 Wt35e01.x	2 BE748176 BE748176 601571564	1 AA607716 AA607716 VO49b04.r	1 AU104848 AU104848 AU104848	CG465712 CG465712	9 AL943583 Arabidops	CV307280 CV307280	27 BH609427	7 H23825 yn71e03.81	1 AU107081 AU107081 AU10708	CK628443	8 AZ385410 AZ385410 1M0143E22	7 CF296199 30DGS06	1 AA016653 AA016653 mg89g11.r	4 BI770067 BI770067 603053595	1 AI631110 AI631110 t863e01.x	1 AA993587 AA993587 ot44g10.8	7 20000 +: 400000 til
	Length D	55	49	26	51	48	49	55	49	20	51	55	9	46	49	20	25	28	32	40	40	46	49	S.
* Ouery	Match	47.0	41.4	41.4	40.0	38.9	38.9	38.9	38.6	38.6	38.6	37.9	37.9	37.5	37.5	37.5	37.5	37.5	37.2	37.2	37.2	37.2	37.2	27.0
	Score	26.8	23.6	23.6	22.8	22.2	22.2	22.2	22	22	22	21.6	21.6	21.4	21.4	21.4	21.4	21.4	21.2	21.2	21.2	21.2	21.2	د د
Result	No.		7	ო	4.	'n	9			ر 0	-	11	12	13	14	c 15	16	17	-	c 19	50	21	c 22	·

ALB78489 ALB78489 BH636598 1008012C0 AL688077 wa83003.x AG194008 Pan trog1l AU106032 AU106032 AL092092 Qa57G07.8 CG774833 1123021A1 CW020376 GC056 TI CW020376 GC056 TI CW020376 AC0516017G0 BQ567053 G176412.x AZ80029 2M058B15 AZ89721 M0337K08 AZ875350 2M0189M19 CN446714 t149b03 5 CR02833 Forward 8 AL984525 Danio rer BH641399 1008047C1 CR002872 Forward 8 CR002873 Forward 8 CR002873 FOrward 8 CR02833 FOrward 8	ALIGNMENTS  AAJ32865  AAJ32865  AAJ32865  SIMILAR TO SWICKZ BOVIN PO0130 UBIQUINOL-CYTOCHROWE C REDUCTASE SIMILAR TO SWICKZ BOVIN PO0130 UBIQUINOL-CYTOCHROWE C REDUCTASE COMPLEX 7.2 KD PROTEIN; mRNA sequence.  AAJ32865.1 GI:1856126  EST. MAJ32865.1 GI:1856126  EST. BAM323965.1 GI:1856126  EST. BAM32965.1 GI:1856126  EST. BAM32965.1 GI:1856126  EST. BAM32965.1 GI:1856126  ENGARYOTE A MACEACOB, Chordata, Craniata, Vertebrata; Euteleostomi, Mammalia; Eutheria, Primates; Catarrhini; Hominidae; Homo.  I (Dases 1 to 53)  Kucaba, T. Lacy, M. Le N. Bowles, L. Dubucque, T. Gasles, G., Jost.S., Kucaba, T. Lacy, M. Le N. Lennon, G., Marra, M. Martin, J.  More, B., Schellenberg, K., Steptoe, M. Tan, F., Theising, B., Wash, Wash, W. Errer, Project 1997  Contact: Wilson RK  Washington University School of Medicine  4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108  Fax: 314 286 1800  Fax:
AL878489 BH636598 A1688077 AG194008 AG194003 CG744833 CW021509 CK021509 AZ820025 BQ567053 AI612870 AZ890721 AZ899721 AZ899721 AZ899721 AZ899721 BH641399 CR028335 CR028335 CR028335 CR028335	ALIGNMENT  S. bp  BOVIN PRO130 U  SIN ;, MRNA SE  L26  Chordata; Cat  Primates; Cat  Le, N., Lennon  How, Stepto  Waterston, R.  School of M  Exway, Box 850  Exway, Box 850  Exway, Box 850  Exway, Box 850  Experimentation  Std Error: 0  Exd
	rea_NhH UCKX_BO PROTEI :185612  azoa; C eria; P ceria; P
2 2 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5	AA232965 2169304.81 Soares NhH 2169304.81 Soares NhH 22965.1 GI:185612 AA323965.1 GI:185612 EST. Homo sapiens (human) Homo sapiens (buman) Homo sapiens Eukaryota, Metazoa; C Mammalia; Eutheria; P 1 (bases 1 to 55) Hillier, L., Allen, M., i Moore, B., Schaely, M., i Moore, B., Schaely, M., i Moore, B., Schaely, M., i Moore, B., Schael, M., i Mashington University Forest Park Park Tel: 314 286 1810 Fax:
778888864444444444444444444444444444444	and the state of t
<i>• • • • • • • • • • • • • • • • • • • </i>	AA232965 Similar to 18 Similar to 18 COMPLEX 7.2 AA232965.1 AA232965.1 BA232965.1 EST. AA232965.1 EST. BEATYOIN WITHOUS SUPPLIESTION WASHINGTON WASHINGTON UNDULISHED TO 18 TIRGE CONSORT TRACE CONSOR
66666888888881111222	AAA22 CCOM AAA22 AAA22 AAA22 Buk Wwhill Turk Wassing Homm
000000000000000000000000000000000000000	L SE S N ON C
2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	S NITIC 1 1 2965 5 S NITIC 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
0 0 0 0 0 0 0 0	RESUJ AA233 LOCUG DEFIJ ACCES SOURG SOURG COMMI

```
Department of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity 45.7%
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             . . 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BH413716.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zea mays
                         Zea mays
                                                                                                                               Walbot, V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zea mays
                                            Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BH413716/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
COMMENT
                                                                                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were made in vitro. Pollowing HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools 340488-345479, and 484488-489479."
                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                               AA878748 1 NCI CGAP Li5 How o sapiens cDNA clone IMAGE:1437099 3 of select to SW:VNUA PRVKA P34485 PROBABLE NUCLEAR ANTIGEN. ; contains element TAR1 repetitive element ; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GSS 14-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BH638481 56 bp DNA linear GSS 14-FEB-2005
1008022G07.2EL_y1 1008 - RescueMu Grid I Zea mays genomic, genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone lib="NCI CGAP_Lis"
/note="Organ liver; Vector: pCMV-SPORT4; Site 1: Sal1;
Site 2: Not1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 0.8 kb."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 49)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                  26
                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                       55 GACCACATCCTCGAGGGACGCTGTGGCATCCCCTCAAGCACAAGTATGAGAAC
                                                                                                                                                                                                                                                                  3 GUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACC
                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 41.4%; Score 23.6; DB 1; Length 49; Best Local Similarity 52.6%; Pred. No. 1.5e+05; Matches 20; Conservative 9; Mismatches 9; Indels
                                                                                                                                                                                          Length 55;
                                                                                                                                                                                                                             17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCTCCCCGCGGGGGTCTTTGGGATCCCGCCTGGC 3
                                                                                                                                                                                         47.0%; Score 26.8; DB 1;
ilarity 48.1%; Pred. No. 1.6e+04;
Conservative 11; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown library type
Trace considered overall poor quality
Seg primer: -40ml3 fwd. ET from Amersham
High quality seguence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="hepatic adenoma"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="IMAGE:1437099"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    survey sequence.
BH638481
BH638481.1 GI:18662595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA878748.1 GI:2987713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                             26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                            Query Match
                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                            RESULT 2
AA878748/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BH638481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                      DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSS 12-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maize genomic sequences found using engineered RescueMu transposon Unpublished (2001) Contact: Walbot V
                                                                                      Maize genomic sequences found using engineered RescueMu transposon
Unpublished (2001)
Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BH413716 51 bp DNA linear GSS 12-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Bermatophyta, Magnoliophyta, Liliopaida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.
1 (bases 1 to 56)
                                                                                                                                                                                                                                                 Possible ligation site of ends cut by 2 different endonucleases. Reverse complemented post-ligation sequence from source sequence. Plate: 1008022 row: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 CCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41.4%; Score 23.6; DB 8;
45.7%; Pred. No. 1.5e+05;
tive 11; Mismatches 14;
                                                                                                                                                     Stanford University
855 California Ave, Palo Alto, CA 94304,
Tel: 650 723 2227
Fax: 650 725 8221
                                                                                                                                           Department of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                        organism="Zea mays"
                                                                                                                                                                                                                                                                                                      Class: transposon-tagged.
Location/Qualifiers
                                                                                                                                                                                                                                Email: walbot@stanford.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:17590275
```

```
AI956143
AI956143.1 GI:5748453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI956143/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                        DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                 /organism="Zea mays"
/organism="Zea mays"
/mol type="genomic DNA"
/cultivaz="mixed background W23/A188/B73"
/db xref="taxon:4577"
/tissue_type="leaf"
/tissue_type="leaf"
/dab_host="DH10B"
/clone lib="1007" - RescueMu Grid H"
/lab_host="DH10B"
/clone lib="1007" - RescueMu Grid H"
/note="Organ: leaf; Vector: RescueMu (engineered from pBlueScript backbone); Site !: BamH1, Site 2: BBlII;
RescueMu is a 4.9 kb, modified maize Mu transposon designed to allow plasmid rescue from total genomic DNA.
Mu elements insert preferentially into transcription units. For more information on RescueMu, go to the web site 'www.zmdb.isastate.edu' and follow the links for 'RescueMu.' Grid H was grown at Berkeley in 2001. DNA was extracted from leaf punches, double digested using BamH1 and BglII, and ligated to form circular plasmids. DH108 cells were transformed and then screened on LB plates with ampicillin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSS 29-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maize genomic sequences found using engineered RescueMu transposon.
Unpublished (2001)
Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CG777477 48 bp DNA linear GSS 29-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Department of Biological Sciences
Stanford University
Stanford University
Biss California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2237
Fax: 650 725 8221
Email: walbot@stanford.edu
Possible ligation site of ends cut by 2 different endonucleases.
Reverse complemented post-ligation sequence from source sequence.
Plate: 1123054 row: 4
Class: transposon-tagged.
Location/Qualifiers
                                                                              Email: walbot@stanford.edu
Possible ligation site of ends cut by 2 different endonucleases.
Possible ligation site of ends cut by 2 different endonucleases.
Place: 1007034 column: 15
Class: transposon-tagged.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                       CA 94304, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 40.0%; Score 22.8; DB 8; Best Local Similarity 47.1%; Pred. No. 2.6e+05; Matches 16; Conservative 11; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUU 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            855 California Ave, Palo Alto,
Tel: 650 723 2227
Fax: 650 725 8221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CG777477.1 GI:38036695
Stanford University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 48)
Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zea таув
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
CG777477
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DRIGIN
```

요 ઠે

```
/tissue_type="leaf"
/dev_stage="adult"
/dev_stage="adult"
/lab_hote="blots"
/lab_hote="leaf"
/lab_hote="lab_hote="leaf"
/lab_hote="leaf"
/lab_hote="leaf"
/lab_hote="leaf"
/lab_hote="leaf"
/lab_hote="leaf"
/lab_hote="leaf"
/lab_hote="lab_hote="leaf"
/lab_hote="lab_hote="leaf"
/lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote-"lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote="lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_hote-"lab_ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Life Technologies catalog #: 11548-013
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.AG.B. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A1956143 49 bp mRNA linear EST 19-AUG-1999 wt35e01.x1 NCI CGAP Panl Homo sapiens CDNA clone IMAGE:2509464 3' similar to TR:Q61402 Q61402 GRANULE CELL ANTISERUM POSITIVE 8 ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone lib="NCI CGAP Pan1" /clone lib="NCI CGAP Pan1" /clone="Organ: pancreas; Vector: pCMV-SPORT6; Site 1: Sal1; Site 2: NoII; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.72 kb. Life Technologies catalog #: 11548-013"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 49)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
/mol_type="genomic DNA"
/cultivar="mixed background W23/A188/B73/K55"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38.9%; Score 22.2; DB 9; Length 48; larity 45.7%; Pred. No. 4e+05; Conservative 11; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B TCGCGGATTTGCTTCGCCGCTCGTTCGCCCATGGC 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:2509464"
/tissue_type="adenocarcinoma"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 UCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trace considered overall poor quality
Seg primer: -400P from Gibbo
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
```

ORIGIN

/organism="Zea mays"

Bource

```
AA607716
AA607716.1 GI:2455151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGI:584775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AU104848/c
                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                       VERSION
KEYWORDS
SOURCE
                                ACCESSION
                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /d_one="type="from acute myelogenous leukemia"
/ilsue_type="from acute myelogenous leukemia"
/ilsue_type="from acute myelogenous leukemia"
/ilsue_type="from acute myelogenous leukemia"
/clone lib="NIH MGC 55"
/clone lib="NIH MGC 64"
/clone lib="N
                                                                                                                                                                                                                                                                                                                                          BE748176
601571564F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3838695 5',
                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA607716 49 bp mRNA linear EST 30-SEP-1997 vo49b04.rl Barstead mouse irradiated colon MPLRB7 Mus musculus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1 (Dases 1 to 55)

NIH-MGC http://mgc.nci.nih.gov/.

Nith-MGC http://mgc.nci.nih.gov/.

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tissue Procurement: ATCC CDNETECH Laboratories, Inc. CDNA Library Preparation: CLONETECH Laboratories, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Theyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov http://mage.llnl.gov column: 16 High quality sequence stop: 55. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38.9%; Score 22.2; DB 2; Length 55; ilarity 51.4%; Pred. No. 4e+05; Conservative 9; Mismatches 8; Indels
DB 1; Length 49;
Query Match 38.9%; Score 22.2; DB 1; Length 4 Best Local Similarity 41.9%; Pred. No. 4e+05; Matches 18; Conservative 12; Mismatches 13; Indels
                                                                                                                           3 GUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUG 45
                                                                                                                                                              18 GUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGG 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42 GTCCCCGAGAAGCAGACCTCCGGGCATGGCGACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .55
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BE748176.1 GI:10162168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alto, CA)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                           BE74817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
AA607716/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                RESULT 7
BE748176/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DRIGIN
                                                                                                                                                                                     셤
```

```
clone IMAGE:1053199 5' similar to SW:COX2_MOUSE P00405 CYTOCHROME COXIDASE POLYPEPTIDE II ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (Dases 1 to 49)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Gelsel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 28-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUI04848 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone HRC05037, mRNA sequence.
AUI04848 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone AUI04848 Sugano Suga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1996)
Contact: Marxa M/Mouse EST Project
Contact: Marxa M/Mouse EST Project
Washlo-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
Pax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Trace considered overall poor quality
Possible reversed clone: similarity on wrong strand
Seq primer: -20m13 rev2 ET from Amersham
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 CACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAG 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38.6%; Score 22; DB 1; Length 49; 39.1%; Pred. No. 4.6e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .49
/organism="Mus musculus"
/mol_type="mRNA"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="IMAGE:1053199"
/dev stage="8 weeks"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:10090"
                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
```

```
/dev stage="addit"
//clone lib="pBS-NN Library"
/clone lib="pBS-NN Library"
/clone lib="pBS-NN Library"
/note="Vector: pBluescriptkS(+); Site_1: NotI; Site_2:
NotI; Genomic DNA was digested with NotI and the resulting
fragments were ligated into ZADII/NotI vector DNA. After
the digestion with EcoRy, the mixture was run on o.8t LMP
agarose gel, eluted a gel portion over 22 kb and purified
with beta-agarase I. The purified DNA was digested with
NotI, run on 1t LMP agarose gel, and eluted with Gel
Extraction kit the DNA fragments ranging 0.7 to 4 kb,
which cover on first-dimensional gel comprising the
central portion of the standard RLGS profile. The DNA
solution was ligated into pBluescript KS(+) with NotI
ends. The ligated solution was transformed into DH5a cell
using electroporation machine."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strizhov, N., Rosso, M.G., Li, Y. and Weisshaar, B.
Direct Submissalon
Submitted (31-Max-2004) Weisshaar B., Max-Planck-Institut fuer
Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany
This sequence has been recovered from the left border of the T-DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana
Makaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots,
rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GABI-Kat SimpleSearch: a flanking sequence tag (FST) database
the identification of T-DNA insertion mutants in Arabidopsis
thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL943583 SS 01-AP)
Arabidopsis thaliana T-DNA flanking sequence GK-275E04-015100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li, Y., Rosso, M.G., Strizhov, N., Viehoever, P. and Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rosso, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCTCCCTCCTCTGGGGTGGGCGGGGCCTCGGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 22; DB 9; I
Pred. No. 4.6e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bioinformatics 19 (11), 1441-1442 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (thale cress)
    /mol_type="genomic DNA"
/db xref="taxon:9606"
                                                                             /clone="KRIBB_2D_J77"
                                                                                                                                                      /tissue_type="blood"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL943583.1 GI:24400181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38.6%;
50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 55)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22755829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14756321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14682050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL943583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                      Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
Institute of Medical Science, University of Tokyo
H-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp
Suzauki,Yr. Yoshitomo-Nakagawa,Kr., Maruyama,Kr., Suyama,A. and
Sugano,S. Construction and characterization of a full
length-enriched and a 5'-end-enriched cDNA library. Gene 200 (1-2),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSS 24-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This result was produced by the program for Functional Analysis of Human Genome funded from Ministry of Science and Technology, Republic of Korea. Clones are available from the Center for Functional Analysis of Human Genome. See URL:

http://logenome.kribb.re.kr/ for details or contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 51)
1 (bases 1 to 51)
2 (bases 2 to 51)
3 (bases 3 to 51)
4 (bases 3 to 51)
5 (bases 4 to 51)
6 (bases 5 to 51)
7 (bases 6 to 51)
8 (bases 7 (bases 7 to 51)
8 (bases 7 (bases 7 to 51)
8 (bases 7 to
                                                             Lata, Y., Taira, H., Tsunoda, T., Mizushima-Sugano, J., Sese, J., Hata, Y., Taira, H., Tsunoda, T., Morishita, S., Okubo, K., Hata, H., Ota, T., Isogai, T., Tanaka, T., Morishita, S., Okubo, K., Sakaki, Y., Nakamura, Y., Suyama, A. and Sugano, S.

Diverse transcriptional initiation revealed by fine, large-scale mapping of mRNA start sites

EMBO Rep. 2 (5), 388-393 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human Genome Research Laboratory
Korea Research Institute of Bioscience and Biotechnology
52 Eceun-dong, Yuseong-gu, Daejeon 305-333, Republic of Korea
Tel: 82-42-879-8110
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 50)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KRIBB_2D_J77T7 pBS-NN Library Homo sapiens genomic clone KRIBB_2D_J77 5, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="texaon:966"
/dbone="RRC05037"
/clone_lib="Sugano Homo sapiens cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38.6%; Score 22; DB 1; Length 50; larity 47.8%; Pred. No. 4.6e+05; Conservative 9; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GETCGGCGCCTGCCGGTCCGTGGGGCGAACGCCGAAGGAGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           High quality sequence stop: 51.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: yongsung@kribb.re.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CG465712.1 GI:35189147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sed primer: T7 primer
Class: NotI site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 82-42-879-8119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: KIM YS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               149-156 (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 22; Conserv
```

Query Match

Best Loca Matches

LOCUS DEFINITION

ACCESSION

VERSION KEYWORDS

ORGANISM

REFERENCE AUTHORS JOURNAL

TITLE

CG465712/c

RESULT 10

셤

Bource

FEATURES

Bource

FEATURES

MEDLINE PUBMED

COMMENT

JOURNAL

TITLE

REFERENCE AUTHORS for

ö

Gapa

, 0

```
43.2%; Pred. No. 6.2e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bushman, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST.
                                                                                                                                                                                                                                                                                                                                                           GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                                                                            RESULT 13
BH609427/c
                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
H23825
                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                             ଟ
                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /Gione lib="Mouse 5' RACE clones"
/note="Vector: pCR-TOP02.1; Cloned 5' RACE fragments
amplified from 5' RACE cDNA generated from 15 pooled mouse
tissues and stages: 7, 11, 15, & 17-day total embryo,
whole brain, eye, kidney, liver, lung, prostate,
submaxilary gland, smooth muscle, spleen, testes and
It indicates an insertion close to or within gene At5g61790. Details on the protocols used for generation of the sequence are described in References 1-3. The sequences are generated at the MPI for Plant Breeding Research in the context of the GABI-Kat project GABI-Kat is part of the German Plant Genomics program designated 'GABI'. Information on line availability can be found at: Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                            /note-incr was performed on DNA from Arabidopsis thaliana plants (TI) which were transformed with the T-DNA from vector pAC161 (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi; Mamalla, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (Dases 1 to 60)

Dike,S., Balija,V.S., Nascimento,L.U., Xuan,Z., Ou,J., Zutavern,T., Palmer,L.E., Hannon,G., Zhang,M.Q. and McCombie,W.R.
The Mouse Genome: Experimental examination of gene predictions and transcriptional start sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 23-SEP-2004
                                                                                                                                                                                                                                                                                                         /clone="GK-275E04-015100"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CV307280 60 bp mRNA linear EST 23-
tj42d08.g7 Mouse 5' RACE clones Mus musculus cDNA 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 37.9%; Score 21.6; DB 9; Length 55; Best Local Similarity 45.5%; Pred. No. 6.2e+05; Matches 20; Conservative 10; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 CGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12 CGATGGCTGCAATGGGTTCGTAATCGGGTCTGCCTATGGGATCC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cold Spring Harbor Laboratory
500 Sunnyside Blvd, Woodbury, NY 11797, USA
                                                                                                                                                                                                                    /organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
                                                                                                                                                                                                                                       /mol_type="genomic_DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                        db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: 516 422 4109
Email: balija@cshl.org.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                         /ecotype="Col-0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CV307280.1 GI:52624613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (2004)
Contact: Balija VS
McCombie Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CV307280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
CV307280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
```

37.9%; Score 21.6; DB 7; Length 60;

Query Match

```
/organism="Homo sapiens"

/mol_type="genomic DNA"

/db_xref="taxon:9606"

/clone="HIV03806"

/clone="HIV03806"

/clone="lib="SupT1 HIV-I in vivo integration lines"

/clone="lib="SupT1 HIV-I in vivo integration lines"

/clone="lib="SupT1 HIV-I in vivo integration lines"

/note="A human T-cell line (SupT1) was infected with an HIV-based vector. DNA was isolated and cleaved with an HIV-based vector. DNA was isolated and cleaved with restriction enzymes; linkers were ligated onto the cleaved DNA and DNAs were amplified using one primer that bound to the linker DNA and one that bound to the HIV cDNA. Junctions between integrated HIV proviruses and cellular DNA were cloned and sequenced."
                                                                                                                                                                                                                                                                                                  BH609427 linear GSS 18-DEC-2001 HIV03B06 SupT1 HIV-I in vivo integration lines Homo sapiens genomic clone HIV03B06, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H23825

YNTIHO3.81 Soares adult brain N2D5H855Y Home sapiens CDNA clone IMAGE:173884 3' similar to SP:S33059 S39059 BRGI PROTEIN - icontains TAR1 repetitive element ;, mRNA sequence.
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. (bases 1 to 49)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 46)
Schroder.A.R.W., Shinn,P., Chen,H., Berry, C., Ecker,J.R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
   Gaps
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Favored Sites for HIV-1 Integration in the Human Genome Unpublished (2002)
Contact: Frederic Bushman
Salk Institute Infectious Disease Laboratory
The Salk Institute for Biological Studies
10010 N. Torrey Pines Road, La Jolla, CA 92037, USA
Tel: 858 453 4100 x1630
Pax: 858 554 0341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.5%; Score 21.4; DB 8; Length 46; 48.4%; Pred. No. 6.9e+05;
19; Conservative 11; Mismatches 14; Indels
                                                                                                   TTGAGGCCGAGTCTCAGCATGGCTGCCTCCAGGGTTGAGGGTCC 50
                                                                   13 UCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18 GUNNNNNUGGGCAUGCCUUCGGGCAUGGCU 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46 GTTCCNCATGGGCATGCCGGCCGTGATGACT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: bushman@salk.edu
Class: PCR with specific primers.
    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                             BH609427.1 GI:17922036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H23825.1 GI:892520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
```

```
Search completed: March 15, 2005, 20:38:08
                                                                                                                                                                                                                                  11375929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Job time : 2299 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
    ORGANISM
                                                                                                                                                                                                          MEDLINE
PUBMED
COMMENT
                                                                                    AUTHORS
                                                                REFERENCE
                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  normalization to a Cot = 53. Library constructed by Bento Soares and M.Fatima Bonaldo. The adult brain RNA was provided by Dr. Donald H. Gilden. Tissue was acquired 17-18 hours after death which occurred in consequence of ruptured aortic aneurysm. RNA was prepared from a pool of fissues representing the following areas of the brain: frontal, parietal, temporal and occipital cortex from the left and right hemispheres, subcortical white matter, madalla, thalamus, cerebellum, midbrain, pons and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AU107081 50 bp mRNA linear EST 28-JAN-2004 AU107081 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone HRC06015, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                        Email: est@watson.wustl.edu
Insert Size: 1506
High quality sequence starts: 1
High quality sequence stops: 1
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (infc@image.llnl.gov) for further information.
Trace considered overall poor quality
Possible reversed clone: similarity on wrong strand
Insert Length: 1506 Std Error: 0.00
Seq primer: Promega -21m13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Sorses,M., Tan,F.,
Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                        Unpublished (1995)
Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.5%; Score 21.4; DB 7; Length 49; 52.2%; Pred. No. 7e+05; ive 10; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="GDB:3835919"
/db_xref="taxon:9606"
/clone="IMAGE:173884"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GUCCACCUCGCGGGUNNNNN 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wilson, R.
The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AU107081.1 GI:13556602
EST.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 37.5
Best Local Similarity 52.2
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AU107081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
AU107081/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

```
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shizokanedai, Minatoku, Tokyo 108-8639, Japan
4-6-1, Shizokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ina.u-chyo.ac.jp
Suzuki,Y., Yoshitomo-Nakagawa,K., Maruyama,K., Suyama,A. and
Sugano,S. Construction and characterization of a full
1-length-enriched and a 5'-end-enriched cDNA library. Gene 200 (1-2),
149-156 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.

    (bases 1 to 50)

                                                                                  Suzuki,Y., Taira,H., Teunoda,T., Mizushima-Sugano,J., Sese,J.,
Hata,H., Ota,T., Isogai,T., Tanaka,T., Morishita,S., Okubo,K.,
Sakaki,Y., Nakamura,Y., Suyama,A. and Sugano,S.
Diverse transcriptional initiation revealed by fine, large-scale
mapping of mRNA start sites
EMBO Rep. 2 (5), 388-393 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_"HRC06015"
/clone_lib="Sugano Homo sapiens cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 21.4; DB 1; Length 50;
Pred. No. 7e+05;
9; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47 CTCGGTGGAGCCGGGCCGGTGTTCGGGTAGGGGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14 CGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                    Contact: Yutaka Suzuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 37.5%;
Best Local Similarity 48.7%;
Matches 19; Conservative
```

THIS PAGE BLANK (userg)

us-09-699-667e-62.std.rge

```
March 15, 2005, 06:19:02; Search time 1119.5 Seconds (without alignments) 2467.126 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ggguccaccuccucgcggun........sgggcauggcuaagggaccc 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9416466
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-699-667E-62
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenEmbl:*
1: 90 ba:*
1: 90 pa:;
1: 90 pat:;
1: 90 pat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	AX012284 Sequence	AX012282 Sequence	AX012283 Sequence	AX012285 Sequence	AX012286 Sequence	AX012287 Sequence	AX012288 Sequence	AX012289 Sequence	AX012290 Sequence	AC023787 Homo sapi	AC145130 Homo sapi	AX012291 Sequence	BX321878 Human DNA	BD060287 Secreted	CQ695370 Sequence	BC003411 Homo sapi	AX540424 Sequence	CQ722745 Sequence	AR339235 Sequence
	ID	AX012284	AX012282	AX012283	AX012285	AX012286	AX012287	AX012288	AX012289	AX012290	AC023787	AC145130	AX012291	BX321878	BD060287	CQ695370	BC003411	AX540424	CQ722745	AR339235
	DB	9	<b>9</b>	9	9	ø	ø	9	9	9	თ	~	ø	ď	9	9	0	9	9	9
	Query Watch Length DB	57	57	57	57	57	57	57	57	57	144620	197752	37	60721	267	440	1340	1404	1540	1927
ф	Query Match	100.0	83.2	83.2	83.2	83.2	83.2	83.2	83.2	83.2	60.7	60.0	59.6	57.5	56.5	56.5	56.5	56.5	56.5	56.5
	Score	57	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	34.6	34.2	34	32.8	32.2	32.2	32.2	32.2	32.2	32.2
	Result No.		7	e	4	S	9	7	80	60	10	11	12	c 13	c 14	c 15	c 16	c 17	c 18	c 19

PAT 06-SEP-2000

linear

RNA

AX012282 57 bp. Sequence 44 from Patent W09955856. AX012282 AX012282.1 GI:9998343

RESULT 2
AX012282
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM

synthetic construct synthetic construct

B Prime Seque B Seque B Seque B Seque B Homo B Seque	ACC24583 Homo sapi AF176688 Rattus no AC107597 Rattus no	FINA linear PAT 06-SEP-2000  THE Perreault, J.P.  Be stand that the series of the seri	; Length 57; ; Indels 0; Gaps 0; uccedcaucscuaacscarc 57 :                   rccccarcscraacscarc 57
6 AX6528 9 AX6526 9 AX6526 9 AX6329 9 BD157 6 AX8159 9 BC008 9 BC008	2 AC02458 10 AF1766 2 AC10759 ALIG	Patent W0995856. 998345 uct uct artificial sequenc Lafontaine, D. and yme for rna cleavag 56-A 46 04-NOV-199 INART (CA); LAFONTD N/QUalifiers n/Qualifiers sm="synthetic consi pe="unassigned RNA fe"taxon:32630"	0%; Score 57; DB 6 9%; Pred. No. 0.0016 16; Mismatches CGGUNNNNNNUGGCAUCCU   ::::::    :   : CGGTCCGACCTGGGCATGCCT
32.2.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2 32.2	2.2 56.5 32 56.1 32 56.1	AX012284 AX012284 AX012284 AX012284.1  STATE STATE STATE OTHER SEQUENCE OTHER SEQUENCE NUCLEIC STATE NUCLEIC STATE OTHER (CANORANY PIERRE (CAN	ъ 1 1
00000000000000000000000000000000000000	C 43 C 44 C 45 RESULT 1	LOCUS LOCUS DEFINITION ACCESSION VERYWORDS SOURCE SOURCE AUTHORS TITLE JOURNAL FRATURES SOURCE AUTHORS TITLE JOURNAL OURIGIN	Query Matc Best Local Matches Qy Db

ö

PAT 06-SEP-2000

셤

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9955854 49 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
1. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 83.2%; Score 47.4; DB 6; Length 57; Best Local Similarity 64.9%; Pred. No. 0.57; Matches 37; Conservative 14; Mismatches 6; Indels
                                                                                                                                                           Length 57;
                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                        83.2%; Score 47.4; DB 6;
64.9%; Pred. No. 0.57;
iive 14; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/note="synthetic nucleic acid"
                                               /organism="synthetic construct"
/mol_type="unassigned RNA"
baxef="taxon:32630"
/nofe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                          57 bp
Sequence 48 from Patent W09955856.
AX012286
AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 49 from Patent WO9955856.
AX012287
Location/Qualifiers
|...57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
                                                                                                                                                                                                37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      synthetic construct
                                                                                                                                                                               Best Local Similarity
                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
AX012287
                                                                                                                                                                                                                                                                                                                             RESULT 5
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                      ਨੇ
                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 45 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHEREROOKE (CA)
LOCATION/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Barent: WO 9955856-A 47 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                               Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: W0 995SB6-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                      1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATCGGCTTCGCATGGCGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGGCTTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                   GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 83.2%; Score 47.4; DB 6; Length 57; Best Local Similarity 64.9%; Pred. No. 0.57; Matches 37; Conservative 14; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                           Length 57;
                                                                                                                                                                                                                                                                                                                       6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                             .;
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                           1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="teaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                       83.2%; Score 47.4; DB 64.9%; Pred. No. 0.57; ive 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    other sequences; artificial sequences.
               other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 45 from Patent WO9955856. AX012283 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 47 from Patent W09955856.
                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 64.94
Matches 37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                  REFERENCE
                                                     AUTHORS
                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
AX012285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                         DRIGIN
```

ô

0; Gaps

57

PAT 06-SEP-2000

셤

```
ACO23787 144620 bp DNA linear PRI 09-JAN-2002
Homo sapiens BAC clone RP11-546M8 from 2, complete sequence.
ACO23787
                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Du,F., Haakenson,W., Doebber,A. and Boyer,E.
The sequence of Homo sapiens BAC clone RP11-546M8
Whoublished (2001)
3 (bases 1 to 144620)
Waterston,R.H.
Direct Submission
Submitted (17-FEB-2000) Genome Sequencing Center, Washington
Whotersity School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Waterston, R.H.
Direct Submissel 1 to 144620)

Direct Submissel 2007-2001) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Parkway, St. Louis,
MO 63108, USA

S (Dases 1 to 144620)
Waterston, R.H.
                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 52 04-00V-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (23-OCT-2001) Genome Sequencing Center, Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
1 GGGTCCACCTCGCGGTCCGAGCTGGGGCATGCGGTTCGCATGGCTAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 57;
                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                         organism="synthetic_construct"
                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 144620)
Sulston,J.E. and Waterston,R.
Toward a complete human genome sequence
Genome Res. 8 (11), 1097-1108 (1998)
                                                                                        RNA
                                                                                                                                                                        synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ch 83.2%; Score 47.4; DB Similarity 64.9%; Pred. No. 0.57; 37; Conservative 14; Mismatches
                                                                                    AX012290 57 bp
Sequence 52 from Patent WO9955856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC023787.8 GI:16306517
                                                                                                                                     AX012290.1 GI:9998351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99063792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9847074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                            ORGANISM
                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
AC023787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                   AX012290
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                      PEATURES
                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                     ö
                                                                                                                                                                                                             PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                     Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: WO 995586-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995SBS-6-A 51 04-NOV-1999;
ANANVORANICH SIRNART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                      57
                                                                                                        GGGTCCACCTCCTCGCGGTCCGTCCTGGGCATGCGGCTTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83.2%; Score 47.4; DB 6; Length 57; 64.9%; Pred. No. 0.57; ive 14; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 57;
                                                                                                                                                                                                             linear
                                                     6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83.2%; Score 47.4; DB 6; 64.9%; Pred. No. 0.57;
                  DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_txref="taxon:32630"
/noFe="synthetic nucleic acid"
                                                                                                                                                                                                             RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
other sequences; artificial sequences.
                  Score 47.4; DB Pred. No. 0.57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37; Conservative 14; Mismatches
                                                 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57 bp
Sequence 51 from Patent W09955856.
AX012289
AX012289.1 GI:9998350
                                                                                                                                                                                                    Sequence 50 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                AX012288.1 GI:9998349
                  83.2%;
64.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                     37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 83.2%
Best Local Similarity 64.9%
Matches 37; Conservative
                Query Match
Best Local Similarity
Matches 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                      RESULT 7
AX012288
LOCUS
                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
AX012289
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

ö

REFERENCE AUTHORS TITLE JOURNAL

COMMENT

```
4180. .4362
/rpt_family="MER2_type"
1363. .4636
                                                                                                                                                                                                                                                               4654. .4784
/rpt_family="MER2_type"
1878. .5200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="(TAAAAA)n"
10338. .10358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpt_family="MER1_type"
1681. .11854
rpt_family="MIR"
2055. .12359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7839. .7863
/rpt_family="AT_rich"
8374. .8406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="(TAAA)n"
.0365. .10547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="GA-rich"
| 5591. .15640
                                                                                                                                                rpt_family="AT_rich"
922. .4179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0374. .8405
/rpt_family="(CA)n"
9718. .1002
/rpt_family="(TTA)n"
2354. .2659
                                                                                                                                                                                                                                                                                                                                                                                                                                                5866. 6089

/rpt_family="11"

6422. 6459

/rpt_family="(T)n"

6430. 6716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="(T)n"
12810. .13145
/rpt_family="Malk"
14255. .14307
                                                                                                                                                                                                                                                                                                                                       5201. .5368
/rpt_family="MalR"
5369. .5683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="Alu"
12337. .12356
/rpt_family="(A)n"
12398. .12420
         /rpt_family="Alu"
2695. 287.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="(A)n"
10906. .11034
                                                         /rpt_family="BRVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="(A)n"
0031. .10045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="MaLR"
16287. .16569
/rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                            rpt_family="MaLR"
                                                                                                                                                                                                                             /rpt_family="L1"
/4654. .470/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="Alu"
0046. .10364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="MIR"
16021. .16274
                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5430. .6716
/rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt_family="Alu" | 1995. .10043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt family="Alu"
0518. .10558
                                                                                                     rpt_family="L1"
                                                                                                                                                                           rpt_family="L1"
180. .4362
                                                                                                                                                                                                                                                                                                             1878 .5200
'rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7262. .7359
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'rpt_fa
10164.
                                                                                                                                                                                                                                                                                                                                                                                                                             684.
                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                           repeat_region
                                                                                               repeat_region
                                                                                                                                   repeat_region
                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The RPCI-11 human BAC library was made from the blood of one male donor, as described by Oscegawa, K., Woon, P.Y., Zhao, B., Frengen, E., Tateno, M., Catanese, J.J. and de Jong, P.J. (1998) An improved approach for construction of bacterial artificial chromosome libraries. Genomics 51:1-8. The clone may be obtained either from Research Genetics, Inc. (http://www.resgen.com) or Pieter de Jong and coworkers at the Roswell Park Cancer Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEIGHBORING SEQUENCE INFORMATION:
The clone sequenced to the left is RP11-110K9, 2000 bp overlap; the clone sequenced to the right is RP11-314A6. Actual start of this clone is at base position 161607 of RP11-110K9; actual end is at base position 144620 of RP11-546M8.
                                                                          Mapping information for this clone was provided by Dr. John D. McPherson, Department of Genetics, Washington University, St. Louis McPherson, Department of Genetics, about the map position of this sequence, see http://genome.wustl.edu/gsc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
 University School of Medicine, 4444 Forest Park Parkway, St. Louis, MO 63108, USA
6 (bases 1 to 144620)
                                                                                                                                                                                                                                                                                                                 NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
                                                                                                                                                                                                                                                                                                                                                                                                        This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Data from AC079612 was used to finish this clone, AC023787. Polymorphisms have been identified between AC079612, AC062017, AC023787.
                                                                                                                                                                                                          Web site: http://genome.wustl.edu/gsc
Contact: sapiens@watson.wustl.edu
                                                                                                                                                                                                                                            Center project name: H_NH0546M08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic_DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="RP11-546M8"
/clone_lib="RPCI-11"
.62. .1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="ERV1"
2053. .2102
/rpt_family="MaLR"
2353. .2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="MaLR"
1560. .2052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _family="ERVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAPPING INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           restriction digest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .144620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map="2'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162.
                                                             Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
```

FEATURES

```
soon as it is available and the accession number will
                                              preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14440
17226
17326
18572
18672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10347
10447
12316
12416
14340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20462
20562
22243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22343
22430
22650
22650
22660
22660
22660
23663
23110
23110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
24110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58112
58212
60209
60309
63835
63935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67025
69560
69660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Consensus quality: 176983 bases at least Q40
Consensus quality: 181876 bases at least Q30
Consensus quality: 186025 bases at least Q30
Consensus quality: 186025 bases at least Q30
Consensus quality: 186025 bases at least Q30
Consensus duality: 1820252; sum-of-contigs estimation
Estimated insert size: 192752; sum-of-contigs estimation
Quality coverage: 5.19 in Q20 bases; sqarose-fp estimation.
* NOTE: This is a working draft' sequence. It currently
* consists of 51 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AC145130 197752 bp DNA linear HTG 10-JUN-2003
Homo sapiens chromosome 5 clone RP11-109017, WORKING DRAFT
SEQUENCE, 51 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (10-JUN-2003) Production Sequencing Facility, DOE Joint
Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
Center: Joint Genome Institute
Center Code: JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 197752)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.7%; Score 34.6; DB 9; Length 144620; 50.9%; Pred. No. 1.5e+02; ive 14; Mismatches 14; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC145130.1 GI:31560121
HTG; HTGS PHASE1; HTGS_DRAFT; HTGS_ACTIVEFIN.
HOMO sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center Project Name: 448574
Center clone name: RPCI-11_109017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOE Joint Genome Institute.
Sequencing of Human Chromosome
Unpublished
                             /rpt_family="MaLR"
17273. 17326
/rpt_family="Mariner"
                                                                                                                                               / 1866 - 18256 / 1826 / 1826 / 1826 / 1826 / 1928 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 / 1936 /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 197752)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="#
21941. .22402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 50.9%
Matches 29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC145130
                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
repeat_region
                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
AC145130
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
```

```
bp in length
length
bp in length
                                                                                                                                                                                                                                                                                                               length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown length
of 4026 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ength
                                                                                                                                                                                                                                           ength
                                                                                                                                                                                                                                                                                                                                                                                       ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cortig of 2053 by gap of unknown load of unknown load of unknown load of 1618 by gap of unknown load of 2504 by gap of unknown load of 2349 by gap of unknown load of 2349 by gap of unknown load of 2349 by gap of unknown load 
contig of 1094 begap of unknown loanting of 1500 begap of unknown loanting of 1385 begap of unknown loanting of 1385 begap of unknown loanting of 1424 begap of unknown loanting of 1706 begap of unknown loanting of 1784 begap of unknown loanting of 1586 begap of unknown loanting of 1584 begap of unknown loanting of 2500 begap of unknown loanting of 2500 begap of unknown loanting of 2500 begap of unknown loanting of 2471 begap of unknown loanting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cortig of 1997 b
gap of unknown l
contig of 3526 b
gap of unknown l
contig of 2990 b
gap of unknown l
contig of 3584 b
gap of unknown l
contig of 4721 b
gap of unknown l
contig of 4721 b
gap of unknown l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig c
gap of u
                                                                                                                                       4387:
4487:
5872:
5972:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81621:
85647:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24008:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12315:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12415:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14339:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14439:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18671:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20461:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20561:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22342:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3267:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37991:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11155:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12873:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5189:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17079:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19683:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53085:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69559:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73243:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       10446:
```

ö

Gaps

```
During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone mame. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with conty a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em.; EMBL; Sw.; SWISSPROT; Tr.; TREMBL; Wp.; WORMPEP; Information on the WORMPEP database can be found at http://www.sanger.ac.uk/Projects/C elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromsome 1, constructed by the Sanger Centre Chromosome 1 Mapping Group. Purther information can be found at http://www.anger.ac.uk/HGP/Chr1

XXyac-13CF1 is from the ICT Human YAC library (RA) VECTOR: pYAC4.
                                                                                                                                                                                                                          PRI 25-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 60721)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (25-JUN-2003) Wellcome Trust Sanger Institute, Hinxton, Submitted (25-JUN-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, Callo 1SA, UK. E-mail enquirises. humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk on Jun 25, 2003 this sequence version replaced gi:32187852.
                                                                                                                                                                                                                        BX321878 60721 bp DNA linear PRI 25-.
Human DNA sequence from clone XXyac-13CF11 on chromosome 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 60721;
59.6%; Score 34; DB 6; Length 37; 64.7%; Pred. No. 2.3e+03; ive 12; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAU 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 57.5%; Score 32.8; DB 9; Best Local Similarity 52.3%; Pred. No. 5.9e+02; Matches 23; Conservative 14; Mismatches 7;
                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                       GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone="XXyac-13CF11"
clone_lib="ICI_YAC_RA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic_DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                        BX321878.4 GI:32260914
                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
Homo sapiens
                                          22; Conservative
                                                                                                                                                                                                                                                                        complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center code: SC
  Query Match
Best Local Similarity
Matches 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Martin, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                      RESULT 13
BX321878/c
                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                    ò
                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 53 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGAC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60.0%; Score 34.2; DB 2; Length 197752; 52.7%; Pred. No. 1.8e+02; ive 13; Mismatches 13; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                              length
bp in length
length
bp in length
length
bp in length
bp in length
                                                                                                                                                                                                                                             length
bp in length
length
bp in length
                                                                                                                                                                                                                                                                                                                             length
bp in length
length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
1. 197752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of 11886 bp in length
gap of unknown length
                   bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                              length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
bp in length
                                                                                                                                                                                                         length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /chromosome="5"
/clone="RP11-109017"
/clone_lib="RPCI human BAC library 11"
                                                                                                                                                                                                                                                                                                                                              gap of unknown length
gap of unknown length
contig of 7022 bp in ler
contig of 8731 bp in ler
gap of unknown length
gap of unknown length
gap of unknown length
gontig of 8827 bp in ler
gap of unknown length
gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .37
/organism="synthetic_construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other sequences; artificial sequences.
                                                           contig of 7374 by gap of unknown l contig of 5279 by gap of unknown l contig of 4636 by gap of unknown l contig of 5845 by gap of unknown l contig of 5849 by gap of unknown l contig of 5839 by gap of unknown l
                                                                                                                                                                                                                                                                      of 5980 h
                                                                                                                                                                                                                                                                                                            of 6133
                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="unassigned RNA" /db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37 bp
Sequence 53 from Patent WO9955856.
AX012291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .197752
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                  contig
gap of
contig
gap of
                         contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012291.1 GI:9998352
                                                                                                                                                                                                                                                                                                                                                                                                                145046:
153777:
153877:
162704:
                                                                                                     102006:
102106:
106742:
106842:
112687:
112787:
118426:
                                                             96627:
96727:
                                                                                                                                                                                                                                                                    124506:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162804:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    171863:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171963:
                                                                                                                                                                                                                                                                                                                                  130839:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183849:
                                                                                                                                                                                                                                                                                                                                                                                             144946:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 52.7%
Matches 29; Conservative
  85648
85748
89154
89254
96628
102007
                                                                                                                                                                                                                                                                                                          124607
                                                                                                                                                                 106743
                                                                                                                                                                                                           112688
                                                                                                                                                                                                                                                                                         124507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012291
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
```

g ઠે

ô

Gaps

```
ò
                                                                                           셤
                                                                                                                                                                                                                                                                                                                    Jacobs K., Mccoy,J.M., Lavallie,E.R., Racie,L.A., Merberg,D.,
Treacy,M., Spaulding,V. and Agostino,M.J.
Secreted expressed sequence tags (sESTs)
Patent: JP 2001518793-A 647 16-OCT-2001;
RN JP 2001518793-A/647
PN JP 2001518793-A/647
PN JP 2001518793-A/647
PN JP 2001518793-B/647
PN JP 2001518797 US 08/837312
PN RENNETH JACOBS, JOHN M MCCOY, EDWARD R LAVALLIE, LISA A RACIE, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                 PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 03-FEB-2004
                                                                                                                                                                                                                                                Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoldeae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strandedness:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PI MAURICE TREACY, VIKKI SPAULDING, MICHAEL J AGOSTINO PC C12N15/12, C12N5/10, C07K14/47, C12Q1/68, A61K38/17 CC Stran Double; CC Topology: Linear; FH Kev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 56.5%; Score 32.2; DB 6; Length 267; Best Local Similarity 50.9%; Pred. No. 4e+03; Matches 27; Conservative 13; Mismatches 13; Indels (
Liew,C.C., Marshall,W.E. and Zhang,H.
Compositions and methods relating to osteoarthritis
Patent: WO 02070737-A 40296 12-SEP-2002;
Chondrogene Inc. (CA)
                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                       Secreted expressed sequence tags (SESTS). BD060287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CQ695370 440 bp DNP
Sequence 40296 from Patent WO02070737,
CQ695370 GI:42241732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .440
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

    .267
    /organism="Zea mays"
    /mol_type="genomic DNA"
    /db_xref="taxon:4577"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                       BD060287.1 GI:22605893
JP 2001518793-A/647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                          1 (bases 1 to 267)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ното варіепв
                                                                                                                                                                                                              Zea mays
Zea mays
                                                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
CQ695370/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                             RESULT 14
BD060287/c
                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
```

56.5%; Score 32.2; DB 6; Length 440;

Query Match

Search completed: March 15, 2005, 12:35:00 Job time : 1124.5 secs

THIS PAGE BLANK (USPTO)

Sequence Sequence Sequence

Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence

Sequence

Sequence

Sequence

Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

RESULT 1

US-10-040-739-647/c

is Sequence 647, Application US/10040739

i Publication No. US20020173635A1

i GENERAL INFORMATION:

i APPLICANT: Jacobs, Kenneth

Merberg, David

Treacy, Maurice
Spauldine, Edward

Racie, Lisa
Merberg, David

Treacy, Maurice
Spaulding, Vikki

TITLE OF INVENTION: SECRETED, EXPRESSED SEQUENCE TAGS
NUMBER OF SEQUENCES: 1519

CORRESPONDENCE ADDRESS:

STATE: Wassachusetts
CONFEST: 87 CambridgePark Drive
CITY: CambridgePark Drive
CITY: CambridgePark Drive
COMPTRY: U.S.A

COMPTRY: U.S.A

COMPTRE: 1BM FC Compatible
OFFRENTION STEER: PLOPPY DISK
COMPUTER: BLEACHIN SAIGHS

COMPUTER: BLEACHIN DATA:
APPLICATION NUMBER: US/10/040,739

FILING DATE: 03-UNA-1998

ATTORNEY/AGENT INFORMATION:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

score greater t and is derived

SUMMARIES

605, App 853, App 726, App 726, App 185, App 27, Appl 9, Appli

Sequence 647, Requence 40296, Sequence 40296, Sequence 605, Requence 726, Requence 726, Requence 27, App. Sequence 9, App.

US-10-040-739-647 US-10-242-555A-40296 US-10-085-783A-40296 US-10-466-164-36 US-10-106-689-605 US-10-037-270-726 US-10-037-270-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726 US-10-117-722-726

113 113 113 113 113

267 440 11440 11430 11927 22206 22298

12642978911

000000000000

Description

a

DB

Length

Query Match

Result

	Copyright (c) 1993 - 2005 Compugen Ltd.
OM nucleic - nu	nucleic search, using sw model
Run on:	March 15, 2005, 10:59:13 ; Search time 376.5 Seconds (without alignments) 900.574 Million cell updates/sec
Title: Perfect score: Sequence:	US-09-699-667E-62 57 1 ggguccaccuccucgcgguncgggcauggcuaagggaccc 57
Scoring table:	IDENTITY NUCDX Gapop 10.0, Gapext 1.0
Searched:	5537552 segs, 2974263231 residues
Total number of	hits satisfying chosen parameters: 11075104
Minimum DB seq Maximum DB seq	length: 0 length: 200000000
Post-processing:	<pre>j: Minimum Match 0% Maximum Match 100% Listing first 45 summaries</pre>
<b>Датараве</b> :	Published Applications NA:*  l: /cgn2_6/ptodata/1/pubpna/USO7 PUBCOMB.seq:* 2: /cgn2_6/ptodata/1/pubpna/USO6 NEW PUB.seq:* 3: /cgn2_6/ptodata/1/pubpna/USO6 NEW PUB.seq:* 4: /cgn2_6/ptodata/1/pubpna/USO6 NEW PUB.seq:* 5: /cgn2_6/ptodata/1/pubpna/USO6 PUBCOMB.seq:* 6: /cgn2_6/ptodata/1/pubpna/USO9 NEW PUB.seq:* 7: /cgn2_6/ptodata/1/pubpna/USO9 NEW PUB.seq:* 8: /cgn2_6/ptodata/1/pubpna/USO9 NEW PUB.seq:* 9: /cgn2_6/ptodata/1/pubpna/USO9 NEW PUB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO9 NEW PUB.seq:* 11: /cgn2_6/ptodata/1/pubpna/USO0 PUBCOMB.seq:* 12: /cgn2_6/ptodata/1/pubpna/USO0 PUBCOMB.seq:* 13: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 14: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 15: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 16: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 17: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 18: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 19: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO0 NEW PUB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO0 PUBCOWB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO0 PUBCOWB.seq:* 10: /cgn2_6/ptodata/1/pubpna/USO0 PUBCOWB.seq:* 10: /cgn2_6/ptodata/1/pubna/USO0 PUBCOWB.seq:* 10: /cgn2_6/ptodata/1/pubna/USO0 PUBCOWB.seq:* 10: /cgn2_6/ptodata/1/pubna/USO0 PUBCOWB.seq:* 10: /cgn2_6/p
	. The same of the

```
259 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGGCATGGCTAAAGG 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-466-164-36/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Lidew, C.C.
TITLE OF INVENTION: Compositions and Methods Relating to Osteoarthritis
FILE REPERENCE: 4231/2005
CURRENT APPLICATION NUMBER: US/10/242,535A
CURRENT FILING DATE: 2002-09-12
PRIOR PAPLICATION NUMBER: US 10/085,783
PRIOR PRILING DATE: 2002-02-28
PRIOR PRILING DATE: 2001-07-13
PRIOR PRILING DATE: 2001-07-12
PRIOR PRILING DATE: 2001-07-28
NUMBER: 0F SEQ ID NOS: 58994
SOFTWARE: PatentIn version 3.2
LENGTH: 4440
                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                 172 GTGACAGCTTCCTTGAGAAGCTCCATGGCATGGCTATGGGCTATGGCTATGGCTATAAGG 120
                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 440;
                                                                                                                                                                                                                                                                                                                                 DB 13; Length 267;
                                                                                                                                                                                                                                                                                                                                                                            13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 17;
                                                                                                                                                                                                                                                                                                                               56.5%; Score 32.2; DB
50.9%; Pred. No. 8.6;
tive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 56.5%; Score 32.2; Di
Best Local Similarity 50.9%; Pred. No. 8.9;
Matches 27; Conservative 13; Mismatches
                                                                                                                                             LENGTH: 267 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
SEQUENCE DESCRIPTION: SEQ ID NO: 647:
US-10-040-739-647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                %30-10-242-535A-40296/c
%Sequence 40296, Application US/10242535A
%PUblication No. US20040013663A1
%GENERAL INFORMATION:
%APPLICANT: ChondroGene Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
b_CCATION: (371)..(371)
CTHER INFORMATION: n is a, c, g, or
US-10-242-535A-40296
                                                               TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 647:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                             TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc feature
LOCATION: (361)..(361)
OTHER INFORMATION: n is a, c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
NAME/KEY: misc_feature
LOCATION: (369)...(369)
OTHER INFORMATION: n is a, c,
                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 50.9%
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: (2). (3)
OTHER INFORMATION: n is a,
                           REGISTRATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG

```
Sequence 40296, Application US/10085783A

Publication No. US20040037841A1

GENERAL INFORMATION:

APPLICANT Chondrodene Inc.

APPLICANT: Chondrodene Inc.

TITLE OF INVERTION: Compositions and Methods Relatiing to Osteoarthritis

TITLE OF INVERTION Compositions and Methods Relatiing to Osteoarthritis

FILE REFERENCE: 4231/2002

CURRENT APPLICATION NUMBER: US/10/085,783A

CURRENT PELLING DATE: 2001-07-13

PRIOR APPLICATION NUMBER: US 60/305,340

PRIOR APPLICATION NUMBER: US 60/275,017

PRIOR APPLICATION NUMBER: US 60/275,017

PRIOR PILING DATE: 2001-02-28

NUMBER OF SEQ ID NOS: 58994

SEQ ID NO 40296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: LINCOLN, Stephen E.; ALTUS, Christina M.;
APPLICANT: LINCOLN, Stephen E.; ALTUS, Christina M.;
APPLICANT: LINCOLN, Stephen E.; ALTUS, Christina M.;
APPLICANT: DUFOUR, Gerard E.; JACKSON, Jennifer L.;
APPLICANT: DUFOUR, Gerard E.; JACKSON, Jennifer L.;
APPLICANT: LIU, Tommy F.; HARRIS, Bernard;
APPLICANT: FLORES, Vincent Z.; DAFFO, Abel;
APPLICANT: CHANG, Simon C.; GERSIIN, Jr., Edward H.;
APPLICANT: CHANG, Simon C.; GERSIIN, Jr., Edward H.;
APPLICANT: LEWIS, Samantha A.; DAVID, Marie H.;
TITLE OF INVENTION! MOLECULES FOR DISEASE DETECTION AND TREATMENT;
FILE REFERENCE: PT-1215 FCT
CURRENT APPLICATION NUMBER: US/10/466,164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 440;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.5%; Score 32.2; Di
50.9%; Pred. No. 8.9;
tive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT FILING DATE: 2003-07-11
PRIOR APPLICATION NUMBER: PCT/US02/01008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc feature
LOCATION: (371).
CHER INFORMATION: n is a, c, g, or t
US-10-085-783A-40296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 36, Application US/10466164
Publication No. US20040058365A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        တ်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY: misc_feature
LOCATION: (369).
OTHER INFORMATION: n is a, c,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY: misc feature
LOCATION: (361)...(361)
OTHER INFORMATION: n is a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (2). (3)
OTHER INFORMATION: n is a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 56.5
Best Local Similarity 50.9
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Human
FEATURE:
NAME/KEY: misc_feature
RESULT 3
US-10-085-783A-40296/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Publication No. US20
GENERAL INFORMATION:
```

ö

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98 GTGRCAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGGCATGGCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1430;
                                                GENERAL INCOMPANT: Birse et al.

TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PAISITE

CURRENT APPLICATION NUMBER: US/10/264,237

CURRENT APPLICATION NUMBER: PCT/USO1/16450

PRIOR PELLING DATE: 2001-00-04

PRIOR PILING DATE: 2001-05-18

PRIOR APPLICATION NUMBER: US 60/205,515

PRIOR APPLICATION NUMBER: US 60/205,515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IITLE OF INVENTION: No. US20030104529A1el Nucleic Acids and IITLE OF INVENTION: Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56.5%; Score 32.2; DB 15; 50.9%; Pred. No. 9.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.5%; Score 32.2; DB 17; 50.9%; Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 784CIP2B
CURRENT PAPLICATION NUMBER: US/10/037,270
CURRENT FILING DATE: 2002-01-04
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-01-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 726, Application US/10037270 Publication No. US20030104529A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 1104
SOFTWARE: Pt. genes Version 1.0
SEQ ID NO 726
LENGTH: 1927
        Publication No. US20040009491A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drmanac, Radoje T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 50.99
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Ren, Feiyan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chen, Rui-hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yang, Yonghong
Wang, Jian-Rui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wehrman, Tom
Xue, Aidong J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shao, Qing A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang, Zhiwei
Tillinghast,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang, Dunrui
                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ma, Yunqing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 zhou,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LOCATION: (88)
US-10-037-270-726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-264-237-853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 605, Application US/10106698
; Sequence 605, Application US/10106698
; Publication No. US20030109690A1
; GENERAL INFORMATION:
    APPLICANT: Ruben et al.
    TILE OF INVENTION: Colon and Colon Cancer Associated Polymucleotides and Polypeptide
    FILE REFERENCE: PA005P1
    CURRENT APPLICATION NUMBER: US/10/106,698
    CURRENT PILING DATE: 2002-03-27
    PRIOR APPLICATION NUMBER: PCT/US00/26524
    PRIOR PILING DATE: 1999-09-29
    PRIOR PILING DATE: 1999-09-29
    PRIOR PILING DATE: 1999-09-29
    PRIOR PILING DATE: 1999-11-03
    NUMBER OF SEQ ID NOS: 8664
    SOFTWARE: Patentin Ver. 3.0
    SEQ ID NO 6055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. US20040058365A1 LI:199716.6:2001JAN12
US-10-466-164-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98 GTGRCAGCTTCCTTGAGAAGCTCCATGGCATGGCTATGGCTATGGCTAAAGG 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCCUCGCGGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 56.5%; Score 32.2; DB 17; Length 1404; Best Local Similarity 50.9%; Pred. No. 9.7; Matches 27; Conservative 13; Mismatches 13; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; DB 15; Length 1430; 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Indels

    Score 32.2; Di
    Pred. No. 9.7;
    Mismatches

PRIOR FILING DATE: 2002-01-09
PRIOR APPLICATION NUMBER: US 60/261,865
PRIOR PILING DATE: 2001-01-16
PRIOR PLING DATE: 2001-01-19
PRIOR PLING DATE: 2001-01-19
PRIOR PLING DATE: 2001-01-19
PRIOR PLING DATE: 2001-01-19
PRIOR FILING DATE: 2001-01-19
PRIOR FILING DATE: 2001-01-19
PRIOR FILING DATE: 2001-01-17
PRIOR PLICATION NUMBER: US 60/262,208
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-19
PRIOR PLING DATE: 2001-01-12
NUMBER OF SEQ ID NOS: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 853, Application US/10264237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 50.99
Matches 27, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-106-698-605/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-10-264-237-853/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-106-698-605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 36
LENGTH: 1404
```

ઠે 셤 ò 8

```
TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-10-139-262-9/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-176-306-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        594 GTGACAGCTTCCTTGAGAAGCTCCATGGCCATGGCTATGGGCTATGGCTATGGCTATGGCTAAAGG 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNUGGCCAUGCCUUCGGGCAUGCCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1927;
                                                                                                                                                                                                              APPLICANT: Tangy Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Liu, Chenghua
APPLICANT: Liu, Chenghua
APPLICANT: Abundi, Vinod
APPLICANT: Drmana, Ninod
APPLICANT: Drmana, Radoje T.
TITLE OF INVENTION: No. US20030219744A1e1 Nucleic Acids and
TITLE OF INVENTION: No. US2003021974A1e1 Nucleic Acids and
TITLE OF INVENTION: No. US2003021974A1e1
CURRENT APPLICATION NUMBER: US/10/117,722
CURRENT APPLICATION NUMBER: 09/620,312
PRIOR FILING DATE: 2000-07-19
PRIOR FILING DATE: 2000-07-19
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1104
SOFTWARE: PL_Genes Version 1.0
SEQ ID NO 726
LENGTH: 1927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 11; Length 2206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 185, Application US/09764875
Publication No. US20040018969A1
GENERAL INPORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFRENCE: PUZO2
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrapper
NUMBER OF SEQ ID NOS: 1249
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Pred. No. 10;
13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.5%; Score 32.2; 50.9%; Pred. No. 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56.5%; Score 32.2; 50.9%; Pred. No. 9.
                                                                                                                                                  Sequence 726, Application US/10117722 Publication No. US20030219744A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 50.9%
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 50.9
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; NAME/KEY: CDS
; LOCATION: (88)..(1224)
US-10-117-722-726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
US-09-764-875-185/c
                                                                                                                                      US-10-117-722-726/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-764-875-185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         و
B
                                         셤
```

1998-62263

```
RESULT 13
US-10-028-072-27/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE
                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                   FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 9, Application US/10255969
Publication No. US20030083486A1
GENERAL INFORMATION:
APPLICANT: NAKAMURA, TOSHIHIRO
APPLICANT: TANAKA, TOSHIHIRO
APPLICANT: TSUKADA, SHUICHI
TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE PROTEIN ORIGINATING IN MAMMALS
FILE REFERENCE:
                   APPLICANT: TSUKADA, SHUICHI
TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE PROTEIN ORIGINATING IN MAMMALS
FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1155 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGCCATGGCTAAAAG 1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13; Length 2519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56.5%; Score 32.2; DB 13; Length 50.9%; Pred. No. 10; Indels tive 13; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
LOCATION: (1540)..(1542), (1582)..(1584), (1693)..(1695)
OTHER INFORMATION: Xaa is Phe or Ser
                                                                            CURRENT APPLICATION NUMBER: US/10/139,262
CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: US/09/380,287A
PRIOR FILING DATE: 1999-11-16
PRIOR FILING DATE: 1997-02-28
PRIOR FILING DATE: 1997-02-28
PRIOR PILING DATE: 1998-02-25
NUMBER: OF BEO ID NOS: 42
SEO ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: (1492)..(1494)
OTHER INFORMATION: n is a or g or c or t
OTHER INFORMATION: Xaa is Gln or Lys or Glu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/255,969
CURRENT FILING DATE: 2002-09-27
PRIOR APPLICATION NUMBER: US/09/380,287
PRIOR FILING DATE: 1999-11-16
PRIOR APPLICATION NUMBER: JP
PRIOR FILING DATE: 1997-02-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature
1. LOCATION: 2493, 2516
1. OTHER INFORMATION: n is a or g or c or t
0S-10-139-262-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc feature
LOCATION: (289)..(291)
OTHER INFORMATION: Xaa is Phe or Leu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature
LOCATION: (1015)..(1017)
OTHER INFORMATION: Xaa is Lys or Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
LOCATION: (1609)..(1611)
OTHER INFORMATION: Xaa is Gln or
TOSHIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 50.99
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: (1)..(1785)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-255-969-9/c
                                                                                                                                                                                                                                                                                                                                            2519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 14; Length 2519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEATURE:
NAME/KEY: misc_feature
LOCATION: (1540)..(1542), (1582)..(1584), (1693)..(1695)
OTHER INFORMATION: Xaa is Phe or Ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (1492)..(1494)
OTHER INFORMATION: n is a or g or c or t
OTHER INFORMATION: Xaa is Gln or Lys or Glu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.5%; Score 32.2; 1 50.9%; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc_feature
LOCATION: 2493, 2516
COTHER INFORMATION: n is a or g or c or t
US-10-255-969-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/028,072 CURRENT FILING DATE: 2001-12-19
                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: (1)..(1785)
FEATURE:
NAME: NAME: feature
LOCATION: (289)..(291)
OTHER INFORMATION: Xaa is Phe or Leu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature
LOCATION: (1015)..(1017)
OTHER INFORMATION: Xaa is Lys or Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: (1609)..(1611)
OTHER INFORMATION: Xaa is Gln or Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 27, Application US/10028072
Publication No. US20030004311A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maureen
PRIOR APPLICATION NUMBER: JP
PRIOR FILING DATE: 1998-02-25
NUMBER OF SEQ ID NOS: 42
SOFTWARE: Patentin Ver: 2.1
SEQ ID NO 9
LENGTH: 2519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerritsen, Mary E.
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 50.5%
The Street 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gao, Wei-Oiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
```

ö

NUMBER: 60/049911 1997-06-18 1997-08-26 1997-08-26 NUMBER: 60/059113 1997-09-17 1997-09-17 NUMBER: 60/059117 1997-09-17 NUMBER: 60/05912 1997-09-17 NUMBER: 60/05912 1997-09-17	NUMBER: 60/0592 1997-09-18 1997-09-18 1997-09-19 NUMBER: 60/0595 1997-09-61 NUMBER: 60/0622 1997-10-17 NUMBER: 60/0622 1997-10-17 NUMBER: 60/0628 1997-10-17 NUMBER: 60/0628 1997-10-24 NUMBER: 60/0630 1997-10-24 NUMBER: 60/0630 1997-10-24 NUMBER: 60/0631 1997-10-24 NUMBER: 60/0631 1997-10-24 NUMBER: 60/0633 1997-10-24 NUMBER: 60/0633 1997-10-27 NUMBER: 60/0633 1997-10-27 NUMBER: 60/0633 1997-10-27 NUMBER: 60/0633	NUMBER: 60/063704 1997-10-29 NUMBER: 60/063733 1997-10-29 1997-10-29 1997-10-29 NUMBER: 60/063738 1997-10-29 NUMBER: 60/064248 1997-11-03 NUMBER: 60/064809 1997-11-03 NUMBER: 60/065186 1997-11-12 NUMBER: 60/065186 1997-11-12 NUMBER: 60/065186 1997-11-12 1997-11-24 NUMBER: 60/066453 1997-11-24 NUMBER: 60/066511
APPLICATION FILING DATE: FILING DATE: FILING DATE: FILING DATE: FILING DATE: FILING DATE:	PPLICATION TILING DATE	APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION FILING DATE: APPLICATION
PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR	PRICE	PRIOR

PRIOR FILING DATE: 1997-12-11
PRIOR PLICATION NUMBER: 60/06534
PRIOR PLILACATION NUMBER: 60/06594
PRIOR PILLACATION NUMBER: 60/07310
PRIOR PILLACATION NUMBER: 60/07311
PRIOR PILLACATION NUMBER: 60/07312
PRIOR PILLACATION NUMBER: 60/07312
PRIOR PILLACATION NUMBER: 60/08112
PRIOR PILLACATION NUMBER: 60/08112
PRIOR PILLACATION NUMBER: 60/08123
PRIOR PILLACATION NUMBER: 60/08123
PRIOR PILLACATION NUMBER: 60/08123
PRIOR PILLACATION NUMBER: 60/08131
PRIOR PILLACATION NUMBE

Length 2700;

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                               RESULT 15
US-10-121-049-27/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 27
LENGTH: 2700
         US-10-140-808-27
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                               Matches
                                                                                                                                                                                 엄
                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 14; Length 2700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prior Apploication removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.5%; Score 32.2; D
50.9%; Pred. No. 10;
tive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/140,808 CURRENT FILING DATE: 2002-05-07
PRIOR APPLICATION NUMBER: 60/088741
PRIOR PILING DATE: 1998-06-10
PRIOR PELING DATE: 1998-06-10
PRIOR APPLICATION NUMBER: 60/08810
PRIOR PLING DATE: 1998-06-11
PRIOR APPLICATION NUMBER: 60/08953
PRIOR PILING DATE: 1998-06-17
PRIOR PELING DATE: 1998-06-19
PRIOR PILING DATE: 1998-06-19
PRIOR PELING DATE: 1998-06-19
PRIOR PELING DATE: 1998-06-19
PRIOR PILING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-24
PRIOR PELING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-26
PRIOR PILING DATE: 1998-06-27
PRIOR PILING DATE: 1998-06-26
PRIOR PILING DATE: 1998-06-27
PRIOR PILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 27, Application US/10140808 Publication No. US20030017563A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gao, Wei-Qiang
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P. APPLICANT: Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 50.9
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-10-140-808-27/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330RIL17
CURRENT APPLICATION NUMBER: US/10/121,049
CURRENT FILING DATE: 2002-04-12
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                           1886 GTGACAGCTTCCTTGAGAGCTCCATGGGCATGGCTATGGGCATGGCTAAAGG 1834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                            ö
                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 geguccaccuccucecegunnnnnnaeecaueccuuceeccaueecuaagee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 14; Length 2700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                            Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550
56.5%; Score 32.2; DB 14;
50.9%; Pred. No. 10;
tive 13; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 56.5%; Score 32.2; DB Best Local Similarity 50.9%; Pred. No. 10; Matches 27; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search completed: March 15, 2005, 15:51:54
Job time : 379.5 secs
                                                                                                                                                                                                                                Sequence 27, Application US/10121049
Publication No. US20030022239A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                        Beresini,Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin L. Sherwood, Steven
                                         27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                            DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                            Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo Sapien
US-10-121-049-27
```

THIS PAGE BLANK (USPTO)

```
: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PM2-TN012
PM1-GN006
PM2-TN012
PM1-GN006
Z119a11.r
AU128462
BP379433
601064357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP222743
K-EST0171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGENCOURT
601558148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          c123g02.z
170006001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AL558230 AL558230
                                                                                                                                                                               March 15, 2005, 10:06:47; Search time 2476.25 Seconds (without alignments) 876.189 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                           1 ggguccaccuccucgcggun.......sgggcauggcuaagggaccc 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF377686 BF995707 BF995707 BF995707 BF9138462 PF9139433 BF91322743 ECR122548 KCK01771 PF01771 PF01771 PF01771 PF01771 BF018740 CK01771 BF01874 BF694284 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ440211 P
BQ438983 P
CA454195 P
BF214247 6
CO649188 I
BX329141 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68479088
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34239544 segs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                        - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE939096
BF993112
BF977686
BF995707
AA134752
AV128462
BP379433
BE541011
BP207776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP222743
CB123548
CK001771
BF031657
BU657400
CN310414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ440211
BQ438983
CA454195
BF214247
CO649188
BX329141
                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                US-09-699-667E-62
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90 est 1 ... 90 est 2 ... 90 est 2 ... 90 est 2 ... 90 est 4 ... 90 est 6 ... 90 es
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length
                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                        OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Result
```

BE871943 601447974 COS91285 ILLUMIGEN BN564843 AGENCOURT AY413214 Homo sapi AY413215 Pan trogil CR592705 full-long BN822907 BN822907 CR515365 ssalrgb51 CA651173 wreln.pk1 BQ722008 AGENCOURT A1176901 EST220507 CC441411 PUHNF81TB BN923378 AGENCOURT BN9333 AV618833 B1535525 398661 MA CK970752 4086214 B BN839521 K-EST0116 BN185653 FV74C01.y	ints	ALES8230 ALES8230 ALES8230 MANA Linear EST 02-APR-2004 ALES8220 Homo sapiens T CELLS (JURKAT CELL LINE) COT 10-NORMALIZED Homo sapiens cDNA clone CSODJO01YN05 3-PRIME, mRNA sequence. ALES8230. ALES8230.3 GI:46183629 EST. ALES8230.3 GI:46183629 EST. Homo sapiens (human) Homo sapiens (human) Homo sapiens (human) Homo sapiens Contact. Genescope Contac	
BE871943 CO581285 BM564843 AY413214 AY413215 CK592705 BB822907 CK552705 BB822907 CA651173 BQ722008 A1176901 CC441411 BU51254 CC44134 AV618833 BM923378 BE51252 CK670752 BM839521	ALIGNMENT	997 bp reform capiens T CELLS (JURK) ans cDNA clone CSODJOO1YNOS  GI:46183629  nns (human) ans (human) ans (human) ans (human) ans (human) ans (hordata, Cranic Entheria; Primates; Catari 1 to 997) and possible and norm ad (2001) and box construction about this sequence of I and EcoR V sites of tilzed. Library was construction and construction about this sequence and information about this sequence cocation/Qualifiers by and construction about this sequence cocation/Qualifiers and Lype="mRNA" and Lype="mRNA" and Lype="mRNA" coll line="UNRKAT" coll Lype="Coll line="UNRKAT" coll li	
0 C 4 O O E O O O O O O O O O O O O O O O O		man)  (6183629  (6183629  (6183629  (7) Jes  (1) Librar  (2) Librar  (3) Librar  (4) Librar  (5) Librar  (6) Librar  (7) Librar  (7) Librar  (8) Librar  (100 ab  (10	
936 9963 9963 11851 21175 21175 483 483 483 1009 1009 1009 440 850 8538 8538 8538		AL558230 AL558230 Homo sapiens T CEL Homo sapiens cDNA clone CSO AL558230 AL558230.3 GI:46183629 EST. Homo sapiens (human)  ENKATYCLE; Eutheria; Primate In (bases 1 to 997) I., W.B. (Gruber, C., Jessee, Full-length CDNA libraries Unpublished (2001) On Feb 15, 2001 this sequen Contact: Genoscope Genoscope - Centre National St. Homo Sapiens Is strand CDNA was primed end enriched, double-strand into the Not I and ECOR V s was normalized. Library was for more information about http://www.genoscope.cns.fr Corpanisms"Homo sa //coll_type="mRNA" //clone="CSNGOOOTYN //cell_type="MCNAATIZED" //cell_type="T CELL //coll_line="UNDRAATIZED" //coll_line="UNDRAATIZED" //note="Ist strand primer: Five prime digested with Note sites of the pCMVS	
Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ Დ		AL558230 AL558230 Homo sapiens CDN AL558230 AL568230 AL56	
6000000 000000000000000000000000000000		9	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		ALS 8230 LOCUS DEFINITION ACCESSION VERYWORDS SOURCE ORGANISM TITLE JOURNAL COMMENT FEATURES ROUTCE	N 15
0000000		RE CO.	2

Length 997;

Score 33.8; DB 1; Pred. No. 1.7e+02;

59.3%;

Query Match Best Local Similarity

601848430 ILLUMIGEN BX329141

Matches

ઠે g SOURCE ORGANISM

REFERENCE AUTHORS MEDLINE PUBMED

COMMENT

JOURNAL

TITLE

DEFINITION ACCESSION VERSION KEYWORDS

RESULT 2 BE939096

```
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 323)
1 blass L. Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Prunstein,A., deoliveira,P.S., Bucher,P., Jongeneel,C.V., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and Simpson,A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BF377686 329 bp mRNA linear EST 24-NOV-2000 PM2-TN0123-300800-001-g12 TN0123 Homo sapiens cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=PML&t2=PM1-GN0066-311000-001-g08&t3=2000-10-31&t4=1)
Seq primer: puc 18 forward
High quality sequence start: 67
High quality sequence story: 322.
Location/Qualifiers
1. .323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia; Eutheria, Primates; Catarrhini; Hominidae; Homo. 1 (Dases 1 to 129)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="Adult"
/clone lib="GN0066"
/note="Organ: placenta normal; Vector: puc18; Site_1:
Smal; Site_2: Smal; A mini-library was made by cloning
products derived from ORESTES PCR (U.S. Letters Patent
application No. 186,716 - Ludwig Institute for Cancer
Research) profiles into the DUC 18 vector: Reverse
transcription of tissue mRNA and cDNA amplification were
PM1-GN0066-311000-001-g08 GN0066 Homo sapiens cDNA, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                          Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56.5%; Score 32.2; DB 4; Length 323; larity 50.9%; Pred. No. 4.5e+02; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
                                                   GI:12399435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BF377686.1 GI:11339711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
Homo sapiens
                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fax: +55-11-2707001
                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
nes 27; Conserv
                                                   BF993112.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                           ACCESSION
                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BF377686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 191)

Dias Neto,E., Garcia Carea,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bala,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and Simpson,A.J.
                                                                                                                                                                                                                       ывузуну 6
РМ2-ТИО123-300800-001-b12 TN0123 Homo sapiens cDNA, mRNA sequence.
BE939096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=&t2=PM2-TN0123-300 800-001-bl2&t3=2000-08-30&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note=_Organ: testis normal; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 23-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
  Gaps
                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGAC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence tags
Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
20202663
10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.5%; Score 32.2; DB 2; Length 191; 50.9%; Pred. No. 4.3e+02; ive 13; Mismatches 13; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
  13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence start: 4
High quality sequence stop: 190.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            323 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
/clone_lib="TN0123"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: +55-11-2704922
Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
        14;
                                                                                                                                                                                                                                                                                                                   BE939096.1 GI:10467120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27; Conservative
        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF993112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brazil
        28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115
```

source

FEATURES

Matches

ORIGIN

RESULT 3 BF993112 LOCUS

셤 ਨੇ

ö

Gaps

ö

MEDLINE PUBMED

COMMENT

JOURNAL

TITLE

```
Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be sequence in the following URL
(http://www.ludwig.org.br/scripts/gethtmi2.pl?tl=PMI&t2=PMI-GN0066-051100-002-c02&t3=2000-11-05&t4=1)
Seq primer: puc 18 forward
High quality sequence start: 23
High quality sequence stop: 243.
High quality sequence stop: 243.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
Hiller, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chissoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, M., Deris, M., Parsons, J., Prange, C., Rikkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /notes=_Organ: placenta_normal; Vector: pucl8; Site_1:
Smal; Site_2: Smal; A mini-library was made by cloning
products derived from ORESTES PCR (U.S. Letters Patent
application No. 196,716 - Ludwig Institute for Cancer
Research) profiles into the pUC 18 vector. Reverse
transcription of tissue mRNA and cDNA amplification were
performed under low stringency conditions."
                         Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Generation and analysis of 280,000 human expressed sequence tags
Genome Res. 6 (9), 807-828 (1996)
97044478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0889549
Contact: Wilson RK
Mashington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: set@watson.wustl.edu
Email: set@watson.wustl.edu
This clone is available royalty-free through LLNL , contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           474 bp mRNA linear BST 14-MAY-.
Zl19all.rl Soares pregnant_uterus_NbHPU Homo sapiens cDNA clone
AA134752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            147 GIGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGCTATGGCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'Match 56.5%; Score 32.2; DB 4; Length 391; Local Similarity 50.9%; Pred. No. 4.6e+02; les 27; Conservative 13; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
/clone_lib="GN0066"
      Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA134752.1 GI:1695328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                            Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1, .391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Marra, M.
                                                                                                                                 Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
AA134752/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Bali, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Buchar, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /notes Togan: testis normal; Vector: puc18; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 156, 716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 391)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V.,
O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?ti=PM2&t2=PM2-TN0123-
300800-001-g12&t3=2000-08-30&t4=1)
Seq primer: puc 18 forward
High quality sequence start: 11
High quality sequence start: 11
High quality sequence stop: 329.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF995707
PMI-GN0066-051100-002-c02 GN0066 Homo sapiens cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                           Simpson, A.J. Shotgun sequencing of the human transcriptome with ORF expressed shotgun sequencing of the human \ensuremath{\mathsf{L}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70 GTGACAGCTTCCTTGAGAAGCTCCATGGGCTATGGCTATGGCTATAGGCTAAAGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCCUCGCGGUNNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000) 20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence tags
Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000) 10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.5%; Score 32.2; DB 2; Length 329; 50.9%; Pred. No. 4.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
/clone_lib="TN0123"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF995707.1 GI:12402030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                   10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
```

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

MEDLINE PUBMED

JOURNAL

TITLE

LOCUS

RESULT 5 BF995707

셤

Matches

DRIGIN

ACCESSION VERSION

source

FEATURES

ö

Gaps 23 . 0

EST 14-MAY-1997

ö

```
BP379433 Sugano cDNA library, uterus Homo sapiens cDNA clone WMD05861, mRNA seguence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE541011 555 bp mRNA linear EST 09-AUG-2000 601064357F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3450543 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases I to 550)

Suzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J., Mizushima-Sugano, J., Nakai, K. and Sugano, S.
Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions
Genome Res. 14 (9), 1111-1118 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota.

Mammalia; Butheria, Primates; Catarrhini; Hominidae; Homo.

Mammalia; Butheria, Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 555)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Life Technologies, Inc.
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                    .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGUCCACCUCGCGGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                             Length 474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 550;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department of Virology
Institute of Medical Science, University of Tokyo
H-6-1, Sirzokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="uterus"
/clone_lib="Sugano_cDNA_library, uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56.5%; Score 32.2; DB 5; 1
50.9%; Pred. No. 4.8e+02;
tive 13; Mismatches 13;
                                         56.5%; Score 32.2; DB 1; 50.9%; Pred. No. 4.8e+02; iive 13; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="WMD05861"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                            BP379433.1 GI:52412306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BE541011.1 GI:9769755
                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                           Local Similarity 50.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 50.9
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
BE541011
                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                        BP379433
                                             Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE541011/c
                                                                                                                                                                                                                                                                 BP379433/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HRI human cDNA project
Unpublished (2000)
Contact: Takao Isogai
Genomics Laboratory
Helix Research Institute
1532-3 Yana, Kiarazu, Chiba 292-0812, Japan
Tel: 81-438-52-3975
Fax: 81-438-52-3976
Email: genomics@hri.co.jp
RRI human cDNA project; 5- & 3'-end one pass sequencing: Helix
Research Institute; cDNA library construction: Department of
Virology, Institute of Medical Science, University of Tokyo, and
Helix Research Institutes
                                                                                                                                                                                                                 /dev stema="adult"
/lab_host="DH10B"
/clone_lib="Soares_pregnant_uterus_NDHPU"
/note="Organ: uterus; Vector: pT7T3-Pac; Site_1: Not I;
Site_2: Eco RI; 1st strand cDNA was primed with a Not I -
aligo (dr) primer [5]
AACTGAAAATTCGGGGCGCTTTTTTTTTTTTTTTT 3'],
double-stranded cDNA was ligated to Eco RI adaptors
and Eco RI sites of the modified pT7T3 vector. Library
went through one round of normalization. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="mRNA"
/mol_type="mRNA"
/mol_type="texn:9606"
/cell_type="teratocarcinoma"
/cell_type="teratocarcinoma"
/cell_line="NT2"
/cll_line="NT2"
/cll_line="NT2"
/cll_line="NT2"
/cll_line="teratocarcinoma"
/coll_seratocarcinoma"
/coll_seratocarcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AU128462 AUG-2002 AUG-2002 AUI28462 NT2RP2 Homo sapiens cDNA clone NT2RP2003508 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ota,T., Nishikawa,T., Suzuki,Y., Ishii,S., Saito,K., Kawai,Y.,
Yamamoto,J., Wakamatsu,A., Nakamura,Y., Nagai,T., Sugano,S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 egguccaccuccucecegunnnnnuegecaueccuucegecauegcuaageg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 56.5%; Score 32.2; DB 1; Length 4 Best Local Similarity 50.9%; Pred. No. 4.8e+02; Matches 27; Conservative 13; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   constructed by M. Fatima Bonaldo."
Seg primer: -28M13 rev2 from Amersham
High quality sequence stop: 232.
Location/Qualifiers
                                                                                        organism="Homo sapiens"
                                                                                                        /mol_type="mRNA"
/db_xref="GDB:3807352"
                                                                                                                                                        /db_xref="taxon:9606"
/clone="IMAGE:502364"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AU128462.
AU128462.1 GI:10988816
                                                                                                                                                                                                    /sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isogai, T.
                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
AU128462/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DRIGIN
```

ð

ö

```
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 50.9*
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kim, Y.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST.
                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CB123548/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                          BP222743/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                        RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                            /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E. 1 (bases 1 to 581)

Suzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J., Mizuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J., Mizuki, Y., Yamashita, R., Shirota, R. and Sugano, S. Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions

L. Genome Res. 14 (9), 1711-1718 (2004)

Genome Res. 14 (9), 1711-1718 (2004)

Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan

Email: ysuzuki@ims.u-tokyo.ac.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 14-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                   /cell_line="MGC36"
/lab_hogt="DH108"
/clone_lib="NH108"
/note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: NotI;
/note="Organ: cervix; Vector of the cervix of the cerv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP207776 Sugano cDNA library, coronary artery smooth muscle cell
Homo sapiens cDNA clone CAS11782, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="coronary artery"
/cell_type="smooth muscle cell"
/clone_lib="Sugano cDNA library, coronary artery smooth
muscle cell=
CDNA Library Arrayed by: Incyte Genomics, Inc.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/Link at:
http://image.llnl.gov
Plate: LiAM6429 row: b column: 16
High quality sequence stop: 335.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCGCGGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG 53
241 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGCTAAAGG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGCTATGGCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.5%; Score 32.2; DB 5; 50.9%; Pred. No. 4.9e+02; clve 13; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 56.5%; Score 32.2; DB 2; Similarity 50.9%; Pred. No. 4.9e+02; 27; Conservative 13; Mismatches 13;
                                                                                                                                                                                                                                                                        1. .555
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .581
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3450543"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CAS11782"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP207776.1 GI:52064207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 27; Conserval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
BP207776/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matchee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
```

```
BP222743 Sugano cDNA library, COL0679 Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CB123548 635 bp mRNA linear EST 29-JAN-2003
K-EST0171939 L6SCK0 Homo sapiens CDNA clone L6SCK0-33-H12 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. I, Dasea I to 63. Kim,N.S., Hahn,Y., Oh,J.H., Lee,J.Y., Ahn,H.Y., Chu,M.Y., Kim,M.R., Oh,K.J., Cheong,J.E., Sohn,H.Y., Kim,J.M., Park,H.S., Kim,S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Juny 1:0:

Unpublished (2002)

Contact: Kim YS

Contact: Kim YS

Genome Research Center

Korea Research Institute of Bioscience & Biotechnology

Sz Beeun-dong Yuseong-gu, Daejeon 305-333, South Korea

721: +82-42-860-4409

Fax: +82-42-860-4409

Email: yongsung@mail.kribb.re.kr

Plate: 33 row: H column: 12

High quality sequence stop: 635.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 583;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cell line="COL0679"
/clone lib="Sugano cDNA library, COL0679"
/note="melanoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56.5%; Score 32.2; DB 5; 50.9%; Pred. No. 4.9e+02; iive 13; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="COR04310"
                                           COR04310, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CB123548
CB123548.1 GI:28083069
                                                                          BP222743.1 GI:52095648
```

·.

ö

Gaps

.; 0

53

```
1..67
/organism="Homo sapiens"
/mol_type="mRNA"
/db xref="taxon:9606"
/clone="IMAGE:3827962"
/tissue_type="hypernephroma"
/tissue_type="hypernephroma"
/lab_host="DH108 (11 phage-resistant)"
/clone_lib="NIH_MGC_58"
/clone_lib="NIH_MGC_58"
/note="Organ: kidney; Vector: pDNR-LIB (Clontech); Site_l: Sfil (ggccattatggcc); Site_2: Sfil (ggccattatggcc); Site_2: Sfil (ggccattatggcc); Site_2: Sfil (ggccattatggcc); Site_1 Chouble-stranded cDNR was prepared from cell line RNA.
and 3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGGCGAGGCAT-ATGGCCA' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGGCGCACAT-ATGCCA' adaptor sequence: 13'-ATTCTAGAGGCGAGGGGGGCGCAAT-ATGCCA' (where B = A, C, or G and N = A, C, G, or T). Average insert size l:35 kb (range 0:9-4.0 kb). 15/15 colonies contained inserts by PCR: This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                           BF031657 667 bp mRNA linear EST 10-OCT-2000 601558148F1 NIH_MGC_58 Homo sapiens CDNA clone IMAGE:3827962 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 667)
Nath-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rommal: ATCC
Tissue Procurement: ATCC
Creator SWART kit and size-selected for >0.5kb with an average insert size of 1.3kb Library created in the laboratory of Jonathan Kuo and Ted Usdin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA Library Preparation: CLONETECH Laboratories, Inc.
cDNA Library Arrayed by: The I.M. A.G.B. Consortium (LLNL)
DNA Sequencing by: The I.M. A.G.B. Consortium (LLNL)
Clone distribution: MGC clone distribution information can be found through the I.M. A.G.B. Consortium/LLNL at:
http://image.llnl.gov.p. column: 11
                                                                                                                                                                                                                                                                                            268 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGCTAAGG 216
                                                                                                                                                                                                                                                               1 GGGUCCACCUCCCCCCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                            Query Match 56.5%; Score 32.2; DB 7; Length 639; Best Local Similarity 50.9%; Pred. No. 4.9e+02; Matches 27; Conservative 13; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56.5%; Score 32.2; DB 2; Length 667; 50.9%; Pred. No. 5e+02; ive 13; Mismatches 13; IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 635.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BF031657.1 GI:10739369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 56.5% Best Local Similarity 50.9% Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
BF031657/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/dbone="INAGE:30717981"
/tissue_type="Bulk tissue from Human Spinal cord"
/tissue_type="Bulk tissue from Human Spinal cord"
/tissue_type="Bulk tissue from Human Spinal cord"
/tab_host=="DH10B TonA"
/tlab_host=="DH10B TonA"
/tlab_host=="Organ: brain/CNS; Vector: pDNR-LIB; Site_1: Sfil
/directional; Site_2: Sfil (directional); Library is
oligo-dT primed and directionally cloned: S' and 3'
adaptors were used in cloning as follows:
S'-AAGCAGTGGTATACAGCAGAGGGCCATATACGGCCGGG3'
S'-ATTCTAGAGGCCGGACAGCAGGCCCATATGGGCATATACGGCGGGGGGCGACATGGGT)
shart was constructed using the Clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 26-NOV-2003
                                                                                                                                                                             /cell_line="SCK"
/lab_host="Topl0F'"
/clone_lib="L9SCK0"
/note="Organ: Liver; Vector: pT7T3-Pac; Site_1: EcoRI;
Site_2: NotI; The library was contributed by the Soares
Babratory and it was constructed as described by Bonaldo,
M.F., Lennon, G. and Soares, M.B. (1996), Genome Research
6(9): 791-806. RNA was prepared from harvested cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens butarzoa; Chordata; Craniata; Vertebrata; Euteleostomi; Butheria; Metazoa; Catarrhini; Hominidae; Homo. 1 (bases 1 to 639) thtp://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DDNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: NDCM260 row: h column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGGCATGGCTAAAGG 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: Michael Brownstein / Ted Usdin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           скоо1771
AGENCOURT 16379429 NIH_MGC_227 Homo sapiens cDNA clone
IMAGES:30717981 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 635;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Daniela S. Gerhard, Ph.D.
Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 RmloAD7 Bethesda, MD 20892
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Professor Miklss Palkovits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.5%; Score 32.2; DB 6; 50.9%; Pred. No. 4.9e+02; iive 13; Mismatches 13;
                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="L8SCK0-33-H12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 497.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CK001771.1 GI:38527805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27; Conservative
                                                                                                                                                     /sex="M"
                                                                                                                                                                                                                                                                                                                                                                                                               culture.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                i. .639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CK001771/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                      DRIGIN
```

ö

Gaps

.; 0

23

us-09-699-667e-62.std.rst

Job time : 2483.25 secs

```
Gubin, A.N., Lee Y.T., Bouffard, G.G. and Miller, J.L.

Gubin, A.N., Lee Y.T., Bouffard, G.G. and Miller, J.L.

Gubin, A.N., Lee Y.T., Bouffard, G.G. and Miller, J.L.

Gubin, A.N., Lee Y.T., Bouffard, G.G. and Miller, J.L.

Gubin, A.N., Lee Y.T., Bouffard, G.G. and Miller, J.L.

Gontact: Jeffery L. Miller

Laboratory of Chemical Biology

National Institute of Health, Bethesda, MD 20892, USA

Pail John 9B17, National Institutes of Health, Bethesda, MD 20892, USA

Fax: 301 402 2373

Fax: 301 402 2373

Fax: 301 402 2373

Fax: 301 405 2374

Fax: 301 405 2374

Fax: 301 105 Side

Email: jmf@nih.gov

Center (NISC): More information available at:

Chabase.niddk.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Increa"Organ: blood; Vector: pTriplEx2; Site 1: Sfil; Site 2: Sfil; A complementary DNA (cDNA) library from human erythroid precursor cells was constructed using SWART PCR (polymerase chain reaction) cDNA Library Construction Kit (Clontech, Palo Alto, CA) according to the manufacturer's directions, but with alight modifications. Briefly, reverse transcription was performed in the presence of 1 umol/L peptide nucleic acid
                             BU657400 671 bp mRNA linear EST 30-SEP-2002 cl23g02.zl Hembase; Erythroid Precursor Cells (LCB:cl library) Homo sapiens cDNA clone cl23g02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (N-terminal)-blotin-GTC-CAC-CCG-AAG-CTT-G-(C-terminal) and (N-terminal)-biotin-C(T/C)T-GAA-GTT-CTC-AGG-A-(C-terminal). Synthesized cDNA was digested with Sfil and size-selected on a 1% agarose gel (>800bp). Large-scale sequencing of the library was performed by the NIH Intramal Sequencing Center (NISC; Http://www.nisc.nih.gov/)."
                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="blood"
/cisll_type="Exythroid Precursor Cells"
/cell_line="Exythroid Precursor Cells"
/cell_line="Primary Culture of Peripheral Blood
Mononuclear Cells"
/dev stage="Precursor erythroblasts; GPA++"
/lab_host="DH5alpha"
/clone_lib="Hembase; Erythroid Precursor Cells (LCB:cl_library)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: 23 row: g column: 02
Seg primer: 5' lambda-TriplEx2 Seguencing Primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="cl23g02"
                                                                                                                           BUG57400
BUG57400.1 GI:23369582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="unknown'
                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
BU657400/c
                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
```

셤 ઠ

1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG

56.5%; Score 32.2; DB 5; Length 671; 50.9%; Pred. No. 5e+02; Live 13; Mismatches 13; Indels (

27; Conservative

Best Local Similarity Matches 27; Conserv

Query Match

ö

Gaps

23 ö

Search completed: March 15, 2005, 15:20:19

THIS PAGE BLANK (USPTO)

Aai11117 Probe #10
Ab55276 Human foe
Aai32382 Probe #10
Ab42356 Human bra
Ab426487 Human bon
Aak01039 Human Dra
Ab626079 Human gen
Ab626079 Human gen
Ab61035 Human gen
Ab61035 Human gen
Ab64081 Human cDN
Ad104534 Human cDN
Ad7959740 Human can
Ad79774 Human can
Ad79774 Human can
Ad797734 Human can
Ad797734 Human can
Ad73950 Human can
Ad77243 Human can
Ad77243 Human can
Ad77243 Human can
Ad77243 Human son
Ad77243 Human sof
Ad77243 Human sof
Ad77243 Human sof
Ad77243 Human sof
Ad720522 Human sof
Ad220522 Human sof

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Database

```
/*tag= a
/bound_moiety= "Bimolecular ribozyme RzB fragment"
/hote="Forms double-stranded region with bases 37-30 of
sequence AAZ57639"
                                                                                                                                                                                                                                                                                                                                                                                                                                     15. .20
/*tag= b
/*tag= b
/note="Porms double-stranded region with bases 6-1 of
sequence AAZ57639"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                       Nucleotide sequence of bimolecular ribozyme RzB fragment.
                                                                                                                                                                                                                                                                                                                                     Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lafontaine D;
                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                         ADQ97740
ADQ84509
ACN39420
ADQ97744
ADQ97744
ADC71539
ADC77243
ADQ77243
                                                                                                                                                                                   AAC13372
ADQ20522
AAK81439
                                                AAK01029
ABS26079
AAI01035
ABS01077
AAC69636
ABK84081
                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                      ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-CA000391.
                                                          98CA-02230203
                                                                                                                                                                                                                                                                      AAZ57640 standard; RNA; 20
                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                        3595
3595
3595
3595
3595
3648
20190
41190
135005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-096791/08.
 Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                 misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9955856-A2
                                                                                                                                                                                                                                                                                                      05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-NOV-1999
Synthetic
                                                                                                                                                                                                                                                                                      AAZ57640;
                                                                                                                                                                                                                                                     RESULT 1
Aaz57640 Nucleotid
Aaz57638 Trans-act
Aaz57638 Trans-act
Aaz57637 Trans-act
Aah30335 Human col
Aba33150 Human can
Aal36243 Human mus
Abx59231 cDNA enco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aa156352 Human pro
Adi80019 Human tra
Adg97146 Human can
Abx43915 Bovine ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Adj2991 Human mus
Aan01564 Genomic B
Aan70102 Complete
Aah57497 Human liv
Aat3796 Human pro
Aat37973 Human pro
Aaz22179 Human pro
Aaz22179 Human pro
                                                       March 15, 2005, 01:00:51 ; Search time 110.702 Seconds (without alignments) 1069.494 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                    8780412
       GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                  4390206 segs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                         nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAH30335
ABD33150
AAL36243
ABX59231
ADZ29981
AAN70102
AAH57497
AAT727796
AAT79723
AAT54051
AAE54051
AAE64051
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57640
AAZ57636
AAZ57638
AAZ57637
                                                                                                       1 bksgcauggcuaagggaccc 20
                                                                                                                        IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                     genesequ20008:*
genesequ2001as:*
genesequ2001bs:*
genesequ2002as:*
genesequ2003as:*
genesequ2003bs:*
                                                                                                                                                                                                                                                                                                                               geneseqn2003cs:*
geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                               genesegn2004as:*genesegn2004bs:*
                                                                                                                                                                                                                                             N_Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                      geneseqn1980s:*
geneseqn1990s:*
                                                                                         US-09-699-667E-66
20
                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11715
11724
11724
11724
11725
11725
11725
13870
98686
348101
                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   772
772
772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98146
```

Result No.

```
WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
\texttt{F} \times \texttt{X} \times 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                    This is the nucleotide sequence of bimolecular ribozyme RzB fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g., deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-tUNXXNI-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by '). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= c
/bound_moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.1; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 18.4; DB 3; Length 20;
Pred. No. 6.9;
3; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 20 BP; 4 A; 6 C; 8 G; 0 T; 2 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 BKSGCAUGGCUAAGGGACCC 20
                                              Example 5; Fig 4; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92.0%;
85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57636 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 85.09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30. .45
/*tag= c
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20. .25
/*tag= (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .6
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7. .19
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ57636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ57636

ID AAZS

XX AAZ

XX AAZS

XX AAZS

XX IND

XX IND

XX Synt

XX Synt

XX Synt

ET Misc

ET Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
ö
                                                                                             This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAS7641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the substrate (cleavage site to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20. .25
/*teg= c
bound moiety= "SP1.1 substrate bases (AAZ57641) 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Trans-acting antigenomic delta ribozyme; viral RNA cleavage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Frans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 18.4; DB 3; Length 57; Pred. No. 7.7; 3; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lafontaine D;
diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                    Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38 UUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.0%;
85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 85.00,
Best Local 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ57638 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52. .57
/*tag= (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= /
7. .19
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1999;
```

```
New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                       diagnostic and therapeutic applications
                                                                                                                                                           Example 1; Page; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
AAH30335
요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                      Tibozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. table fall structured to have a substrate binding portion with the following sequence 3 -UNNXNN-5. The substrate binding portion with sequence 5 -H*6GNHNN-3. The binding portion of the enzyme has the sequence 5 -H*6GNHNN-3. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3 to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5 to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave the substrate with the capame. The enzyme is used cleavage site by mixing the substrate with the argume. The enzyme is used colleavage site by mixing the substrate with an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= d
52..57
/*tag= "Porms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= c /bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11" \frac{30}{3}0. .4\frac{5}{4}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                        New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                         This is the nucleotide sequence of a trans-acting antigenomic delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzF1.2; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 18.4; DB 3; Length 57; Pred. No. 7.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38 CGGCCAUGGCUAAGGGACCC 57
                                                                                                       Example 1; Fig 2; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ57637 standard; RNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZS7637
AAZS7637
AAZS7637
AAZSAX
AAZ
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
```

Lafontaine D;

Ananvoranich S,

Perreault J,

```
This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme cleaves substrate SP1.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.2) that is constructed to have a substrate binding portion with the following sequence 3.-UNNXNN-5. The binding portion of the enzyme has the sequence 5.-H'*GNNNNNN-3. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (Cleavage site of the substrate (Cleavage site of the substrate (cleavage site is represented by *). At leax one nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing the reappear in inherited disease. The enzymes also have other the repentic, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                  has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human colon cancer cell line Km12L4-A cDNA library derived sequence #269.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polynucleotide library comprising 1079 defined sequences, useful in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human, diagnosis, colon cancer, cancer; malignant; chromosome mapping; detection; colon cancer cell line Km12L4-A; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J, Innis MA, Garcia PD, Sudduth-Klinger J;
Randazzo F, Kennedy GC, Pot D, Kassam A;
Crkvenjakov R, Dickson M, Drmanac S, Labat
Garcia V, Jones LW, Stache-Crain B;
                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
0
                                                                                                                                                                                                                                                                                                                                                                                       92.0%; Score 18.4; DB 3; Length 57; 85.0%; Pred. No. 7.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indela
                                                                                                                                                                                                                                                                                                                                                 Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                         deltaRzP1.1 sequence (AAZ57636) shown in figure 1
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          38 uncechúdecuhádedacce 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0102180P.
98US-0102380P.
98US-0103815P.
98US-0105877P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAH30335 standard; cDNA; 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US022226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0102161P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                         Query Match 92.0
Best Local Similarity 85.0
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Escobedo J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Williams LT, Escour-
Reinhard C, Giese K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHIR ) CHIRON CORP. (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-293155/25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200018916-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-SEP-1998;
29-SEP-1998;
08-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-APR-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAH30335;
```

```
The present invention describes a library of polynucleotides comprising are: (1) an isolated polynucleotide (1) having at least 90% identity to one of the 1079 sequences (given in AAH30067 to AAH31145). Also described are: (1) an isolated polynucleotide (1) having at least 90% identity to one of the 1079 sequences; (2) a recombinant host cell containing (1); cone of the 1079 sequences (11); (5) a vector comprising (1); and (6) a method of detecting differentially expressed genes correlated with a cancerous of detecting differentially expressed genes correlated with a cancerous state of a mammalian cell comprising detecting a gene product encoded by 65 of the 1079 sequences given in the specification. The polynucleotides are used to monitor patients having (or susceptible) to cancer to detect potentially malignant events at a molecular level before they are of etectable at a gross morphological level. The polynucleotides are also useful for monitoring the efficacy of various therapies and preventive interventions. Polynucleotide probes based on the disclosed sequences are useful for chromosome mapping and detection of transcription levels. The 1079 polynucleotide sequences were derived from a human colon cancer cell line Km12L4-A cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to cancer-associated proteins (CAP) and the cancer-associated (CA) nucleic acids encoding them. The invention also relates to a method for treating cancers involving administering to a patient an inhibitor of CAP, and a method of screening for anticancer activity in a potential drug involving providing a cell that expresses a CA gene, contacting a tissue sample derived from a cancer cell with an anticancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; cancer-associated protein; CAP; cancer-associated gene; CA; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel human cancer associated protein encoded within open reading frame of cancer associated gene, useful as targets for diagnoming cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
0
an array to detect cancer or susceptibility to cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 3; Length 396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 396 BP; 130 A; 41 C; 104 G; 119 T; 0 U; 2 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human cancer-associated (CA) gene HD07-019.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 16.8; 1
Pred. No. 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 16; SEQ ID NO 126; 182pp; English
                                                                        Claim 1; Page 262; 502pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23 CTGGCATGGCTAAGGGACAC 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABD33150 standard; DNA; 98146 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-DEC-2003; 2003WO-US040081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-DEC-2002; 2002US-00322281,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SAGR-) SAGRES DISCOVERY INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-NOV-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Malandro MS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ds; cancer; cytostatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-499109/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004058146-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-JUL-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Morris DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABD33150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABD33150
XX
AC ABD3
XX
DT 18-N
XX
DDB Hume
XX
CO The
XX
CO The
CC The
CC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

```
ö
           on expression of the CA gene. The CAP proteins are useful for detecting cancer associated with expression of a CAP protein in a test cell sample and for screening for a bioactive agent capable of modulating the activity of a CAP protein. The CA nucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a tissue. This sequence represents a human CA gene of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein;
candidate and monitoring the effect of the anticancer drug candidate
                                                                                                                                                                  Sequence 98146 BP; 28916 A; 17044 C; 18301 G; 33831 T; 0 U; 54 Other;
                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human musculoskeletal system related polynucleotide SEQ ID NO 2608.
                                                                                                                                                                                          Score 16.8; DB 13; Length 98146; Pred. No. 1.2e+02; 5; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                          *::|||:|||:||| | 46153 CTGGCATGGCTAAGGGACAC 46172
                                                                                                                                                                                                                                                          1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0217496P.
2000US-0218290P.
2000US-0220963P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0220964P.
2000US-0224518P.
                                                                                                                                                                                                84.0%;
70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-JAN-2001; 2001WO-US001338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-0186350P.
2000US-0189874P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0190076P.
2000US-0198123P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0205515P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0209467P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0215135P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0216647P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0216880P.
2000US-0217487P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000US-0225267P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0225268P
                                                                                                                                                                                                                                                                                                                                                   AAL36243/c
ID AAL36243 standard; DNA; 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculoskeletal system; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                          08-JAN-2002 (first entry)
                                                                                                                                                                               Query Match
Best Local Similarity 70...
Best Local 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200155367-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-MAR-2000;
18-APR-2000;
19-MAY-2000;
07-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-AUG-2000;
14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                               AAL36243;
                                                                                                                                                                                                                                                                                                                                      RESULT 7
88888888888888
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                       셤
```

```
2000US - 0235484P

2000US - 0235834P

2000US - 0236327P

2000US - 023637P

2000US - 0236367P

2000US - 0236367P

2000US - 0236369P

2000US - 023639P

2000US - 0236399

2000US - 023703P

2000US - 023703P
2000US-0225447P.
2000US-0225757P.
2000US-0225758P.
2000US-0225759P.
2000US-022686BP.
2000US-022686BP.
2000US-0226887P.
2000US-0229343P.
2000US-0229343P.
2000US-0229343P.
2000US-0229343P.
2000US-0229343P.
2000US-0229343P.
                                                                                                                                                       2000US - 0230437P.
2000US - 0231243P.
2000US - 0231243P.
2000US - 0231244P.
2000US - 0231244P.
2000US - 023144P.
2000US - 0232080P.
2000US - 0232081P.
2000US - 0232081P.
2000US - 0232081P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0241785P.
2000US-0241786P.
2000US-024187P.
2000US-0241808P.
2000US-0241809P.
2000US-0241826P.
2000US-0244617P.
2000US-0246417P.
                                                                                                                                                                                                                                                                                                       2000US-0233063P.
2000US-0233064P.
2000US-0233065P.
                                                                                                                                                                                                                                                                                                                                             2000US-0234274P.
2000US-0234997P.
2000US-0234998P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0246476P.
2000US-0246477P.
2000US-0246478P.
                                                                                                                                                                                                                                                                  2000US-0232398P.
2000US-0232399P.
                                                                                                                                                                                                                                                                                                                                    2000US-0234223P.
                   14-AUG-2000; 2
14-AUG-2000; 2
18-AUG-2000; 2
22-AUG-2000; 2
22-AUG-2000; 2
                                                                           23-AUG-2000;
30-AUG-2000;
01-SEP-2000;
01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-0CT-2000;
13-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
                                                                                                                                     05-SEP-2000;
                                                                                                                                                        06-SEP-2000;
                                                                                                                   01-SEP-2000;
                                                                                                                             01-SEP-2000;
                                                                                                                                                                            08-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-NOV-2000;
                                                                                                                                                                                                                                                                             14-SEP-2000;
                                                                                                                                                                                                                                      08-SEP-2000;
                                                                                                                                                                                                                                                         14-SEP-2000
                                                                                                                                                                                                                                                                   14-SEP-2000;
                                                                                                                                                                                                                                                                                      14-SEP-2000
                                                                                                                                                                                                                                                                                               14-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                29-SEP-2000
29-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                      29-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                              29-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                   25-SEP-2000
  6
```

```
2000US-0246610P.
2000US-0246611P.
2000US-024920TP.
2000US-024920BP.
2000US-024920BP.
2000US-0249210P.
2000US-0249211P.
2000US-0249211P.
2000US-0249211P.
                                                                              2000US-0249214P.
2000US-0249215P.
2000US-0249216P.
2000US-0249217P.
                                                                                                                                  2000US-0249265P.
2000US-0249297P.
2000US-0249299P.
                                                                                                              000US-0249244P
                                                                                                                             2000US-0249264P
                                                                                                                                                      2000US-0249300P
                                                                                                                                                                   2000US-0250391P
                                                                                                                                                                         2000US-0251030P
                                                                                                                                                                                2000US-0251988P
                                                                                                                                                                                      2000US-0256719P
2000US-0251479P
                                                                                                                                                                                                           000US-0251868P
                                                                                                         2000US-0249218P
                                                                                                                      2000US-0249245P
                                                                                                                                                                                                    2000US-0251856P
                                                                                                                                                                                                                                           05-JAN-2001; 2001US-0259678P
                                                                                                                                                                                                                              2000US-0251990P
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                  01-DEC-2000;
05-DEC-2000;
05-DEC-2000;
05-DEC-2000;
06-DEC-2000;
08-DEC-2000;
                                                                              17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                        17-NOV-2000;
17-NOV-2000;
                                                                        17-NOV-2000;
                                                                                                                      17-NOV-2000;
                                                                                                                            17-NOV-2000;
                                                                                                                                  17-NOV-2000;
17-NOV-2000;
                                                                                                                                                17-NOV-2000;
                                                                                                                                                      17-NOV-2000;
```

(HUMA-) HUMAN GENOME SCI INC.

Ruben SM Barash SC, Rosen CA,

WPI; 2001-451937/48.

Isolated polypeptide for treating, preventing and/or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g. diagnosis.

Example 2; SEQ ID NO 2608; 781pp + Sequence Listing; English

The invention relates to novel genes (AAL34669-AAL37666) and proteins (ABB03087-ABB04109) associated with the musculoskeletal system useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant) agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, calcadiovascular disorders such as arthritis and ulcerative collits; (c) cardiovascular disorders such as arthritis and ulcerative collits; (c) cardiovascular disorders such as wiral, cerebral anoxia and epilepsy; and (f) infections diseases such as viral, corpus and not form part of the printed specification, but was cobtained in electronic format directly from WIPO at ftp.wipo.int/pub/published\_pct\_sequences

Sequence 772 BP; 200 A; 179 C; 202 G; 191 T; 0 U; 0 Other;

Score 15.8; DB 4; Length 772; Pred. No. 2.5e+02; 79.0%; Query Match Best Local Similarity

```
Query Match
Best Local Similarity 68.4
Matches 13; Conservative
Gene; se; musculoskeletal system antigen; cancer; metastasis;

re-vascularisation; thrombosis; arteriosclerosis; mineral content;

re-vascularisation; thrombosis; arteriosclerosis; mineral content;

re-vascularisation; thrombosis; arteriosclerosis; mineral content;

w cardiovascular condition; wound; injury; burn; angiogenesis; ulcer;

w post-operative tissue repair; lida regeneration; neuronal growth;

neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;

M AIDS-related complex; chondrocyte growth; bone regeneration;

periodontal regeneration; tissue melanocyte growth; cell proliferation;

w cell growth; organ transplant; cell differentiation; body height; weight;

whair colour; eye colour; skin; percentage of adipose tissue;

pigmentation; cosmetic surgery; metabolism, blorhythm; caricadic rhythm;

depression; tendency for violence; pain; reproductive capability;

w hormone level; endocrine level; appetite; libid; memory; stress;

storage capability; fat content; libid content; protein content;

carbohydrate content; vitamin content; cofactor content;
ö
Gaps
ö
                                                                                                                                         cDNA encoding novel human musculoskeletal system antigen #1575
Indels
 ij
5; Mismatches
                  1 BKSGCAUGGCUAAGGGACC 19
                              ABX59231 standard; cDNA; 772 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0216880P.
2000US-0217487P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0217496P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0218290P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0220964P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0224518P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0225267P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0225268P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0225757P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0229287P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0229343P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0229344P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0229345P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0235834P
                                                                                                                                                                                                                                                                                                                                                                               17-JAN-2001; 2001US-00764877
                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0214886P
                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-0216647P
                                                                                                                        26-FEB-2003 (first entry)
13; Conservative
                                                                                                                                                                                                                                                                                                      nutritional component
                                                                                                                                                                                                                                                                                                                                          US2002147140-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                            10-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-SEP-2000;
                                                                                                     ABX59231;
                                                                RESULT 8
ABX59231/c
Matches
                    ઠે
                                    유
```

```
The invention describes an isolated nucleic acid molecule comprising a sequence encoding musculoskeletal system associated polypeptides useful cor detecting disorders, e.g., cancer or cancer metastases, in animals or humans. The nucleic acid stimulates re-vascularisation of ischaemic tissues associated with conditions; treats wounds due to injuites, burns, post-operative tissue repair, and ulcers; stimulates angiogenesis and other cardiovascular conditions; treats wounds due to injuites, burns, post-operation; stimulates neuronal growth; can treat and prevent neuronal damage occurring in certain disorders or neurodegenesis and limb regeneration; stimulates conditions, such as, Alzheimer's disease, Parkinson's disease, and AIDS-conditions, such as, Alzheimer's disease, Parkinson's disease, and AIDS-conditions, such as frimulates chondrocyte growth, thus they can be used to chance bone and periodontal regeneration and aid in tissue transports or conditions at a prevents skin aging due to sunburn by stimulating crativate hair-forming cells and promotes melanocyte growth; stimulates cravate hair-forming cells and promotes melanocyte growth; stimulates cravate hair-forming cells and promotes melanocyte growth; stimulates cransplantation or for supporting cell culture of primary tissues; induces tissue of mesodermal origin to differentiate in early embryos; increases to mesodermal origin to differentiate in early embryos; increases the differentiation or proliferation of embryonic stem cells, besides, haematopoietic lineage; modulates mammalian community, early bight, weight, hair colour, eye colour, extransplantation as bedipose tissue, pigmentation, size, and shape (e.g., such as, body height, weight, hair colour, eye colour, extransplantation or physical state by infilmenting bothythes, caricadic ribyther and early or proliferation of embryosic commetic surgery); modulates mammalian metabolism; changes mammal's metal communication or physical state by infilmenting bothythes, early caricadic ribyther.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            depression, tendency for violence, tolerance for pain, reproductive capabilities, hormonal or endocrine levels, appetite, libido, memory, or stress, increases or decreases storage capabilities, far content, libid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional components. This sequence encodes a novel human musculoskeletal system aridgen. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the US patent office at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isolated nucleic acid molecules encoding musculoskeletal system associated polypeptides, useful for detecting disorders, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seguence 772 BP; 200 A; 179 C; 202 G; 191 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ftp.seqdata.uspto.gov/sequence.html?DocID=20020147140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 2608; 321pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Barash SC;
                                             2000US-0236802P.
2000US-0237037P.
2000US-0237038P.
                                                                                                                                                                                                                                                                                                                                                      2000US-0241785P.
2000US-0241809P.
2000US-0244617P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0251856P.
2000US-0251868P.
2000US-0251869P.
    2000US-0236370P
                                                                                                                                                                             2000US-0237039P
                                                                                                                                                                                                                  2000US-0237040P.
                                                                                                                                                                                                                                                                                                             2000US-0240960P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0249299P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rosen CA, Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-128199/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROSEN C A.
RUBEN S M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BARA/) BARASH S C
                                                                                                                                                                    02-0CT-2000; 2
02-0CT-2000; 2
13-0CT-2000; 2
20-0CT-2000; 2
29-SEP-2000;
02-OCT-2000;
02-OCT-2000;
02-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                    20-OCT-2000;
01-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ROSE/)
(RUBE/)
```

ö

Gape

ő

79.0%; Score 15.8; DB 8; Length 772; 68.4%; Pred. No. 2.5e+02; ive 5; Mismatches 1; Indels (

```
2000US-0232401P-
2000US-0233065P-
2000US-0233065P-
2000US-023423P-
2000US-023423P-
2000US-0234998P-
2000US-0234998P-
2000US-023898P-
2000US-02389P-
2000US-02389P-
2000US-02389P-
2000US-02389P-
2000US-02389P-
                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0237037P.
2000US-0237038P.
2000US-0237039P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0241221P.
2000US-0241785P.
2000US-0241786P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0241809P.
2000US-0241826P.
2000US-0244617P.
2000US-0246474P.
2000US-0246475P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0246524P.
2000US-0246525P.
2000US-0246526P.
2000US-0246528P.
2000US-0246528P.
2000US-0246538P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0246610P-
2000US-0246611P-
2000US-024613P-
2000US-024920P-
2000US-024920BP-
2000US-024920BP-
2000US-0249210P-
2000US-0249211P-
2000US-0249211P-
2000US-0249211P-
2000US-0249211P-
2000US-0249211P-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0237040P.
2000US-0239935P.
2000US-0239937P.
2000US-0240960P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0246477P.
2000US-0246478P.
2000US-0246523P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0249244P.
2000US-0249245P.
2000US-0249264P.
                                                                                                                         2000US-0232399P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0241787P
2000US-0241808P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0249215P
                                                                                                                                                                                      14-SEP-2000;
21-SEP-2000;
21-SEP-2000;
25-SEP-2000;
25-SEP-2000;
27-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
20-OCT-2000;
08-SEP-2000;
08-SEP-2000;
08-SEP-2000;
08-SEP-2000;
14-SEP-2000;
14-SEP-2000;
14-SEP-2000;
14-SEP-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-OCT-2000;
20-OCT-2000;
20-OCT-2000;
01-NOV-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-2000;
17-NOV-2000;
 musculoskeletal system; cytostatic; osteopathic; cancer; osteoporosis;
gene therapy; vaccine; human; ds.
                                                                                                                                                                                                                       Human musculoskeletal system-associated genomic DNA - SEQ ID 2608.
                                                                                        RESULT 9
ADJ29981/C
XX
XX
ADJ29981;
XX
C
ADJ29981;
XX
C
ADJ2981;
XX
Musculoskeletal system-assock
XX
Musculoskeletal system-assock
XX
Musculoskeletal system, cytostati
XX
Musculoskeletal system, cytostati
XX
Musculoskeletal system, cytostati
XX
C
Homo sapiens.
XX
C
Homo sapiens.
XX
X
ADJ29981;
XX
X
ADJ20981;
XX
ADJ20002
ADJ2002
ADJ2002
ADJ2002
ADJ202
                BKSGCAUGGCUAAGGGACC 19
:::|||:|||:|||| ||
TTGGCATGGCTAAGGGTCC 66
                                               84
                   8 6
```

```
Protein C DNA coding sequence and expression vector for prodn. - used for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            In the construction of the full length protein C gene this sequence the introns removed then is joined to a cDNA clone. The desired genomic:cDNA is then generated by looping out of unwanted sequences using oligomucleotide-directed deletion mutagenesis. The protein produced upon transformation of mammalian host cells, contg. the recombinant DNA, has substantially the same blological activity as natural protein C and is hence useful in the treatment of blood coaquiation disorders. See also AAN81563. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human Protein C; anti-coagulant; thrombosis; serine protease; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11715 BP; 2443 A; 3292 C; 3375 G; 2605 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79.0%; Score 15.8; DB 1; Length 11715; ilarity 73.7%; Pred. No. 3.3e+02; Conservative 4; Mismatches 1: T. T. T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Complete genomic sequence of human Protein C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         treating blood coagulation disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Berkner KL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure, Page ?; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                   label= exon VIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAN70102 standard; DNA; 11724 BP
                                                                                                                                                                                                                                                                                                                            label= exon VII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         877 GGCGCATGCCAAAGGGACC 859
                                                                                                exon III
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= h
/label= exon IX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                       label= exon IV
                                                                                                                                                                                                                                                   label= exon VI
                       exon II
                                                                                                                                                                                                                                                                                                                                                                                                                             0517. .12006
                                                                                                                                                                                                                                                                  (*tag= f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87EP-00309528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86US-00924462
                                                                                                                          .5349
                                                                                                                                                                                                                                                                                                                                                      270. .9387
                                               093. .5117
                                                                                                                                                                                                    452. .5586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ZYMO ) ZYMOGENETICS INC
                          label=
                                                                                                label=
                                                                                                                                                     *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Foster DC, Murray MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI: 1988-121259/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAP81205.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-OCT-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-OCT-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2003
10-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-MAY-1988.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP266190-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAN70102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAN70102/c
                                                 exon
                                                                                                                          exon
                                                                                                                                                                                                    exon
                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a novel isolated musculoskeletal system-associated nucleic acid molecule. The nucleic acid of the invention demonstrates cytostatic and osteopathic activities and may be useful for preparing a medicament for preventing, treating or ameliorating a medical condition such as cancer of the musculoskeletal tissues or osteoporosis, possibly via gene therapy or vaccine production. The current sequence is that of the human musculoskeletal system-associated genomic DNA of the invention. The current sequence is one shown within the specification per se but is available on the USPTO web-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid molecule, useful for preparing a medicament for preventing, treating or ameliorating a medical condition e.g., cancer of musculoskeletal tissues or osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79.0%; Score 15.8; DB 12; Length 772; 68.4%; Pred. No. 2.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 772 BP; 200 A; 179 C; 202 G; 191 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http:seqdata.uspto.gov/sequence.html?DocID=20040009488.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human protein C; blood coagulation disorders; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 2608; 289pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomic sequence encoding protein C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
2131. .2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAN81564 standard; DNA; 11715 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barash SC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
/label= exon I
3464. .3630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 BKSGCAUGGCUAAGGGACC 19
                                                                      2000US-0249300P.
2000US-0250160P.
                                                                                                                        2000US-0250391P.
2000US-0251030P.
                                                                                                                                                                            2000US-0251988P.
                                                                                                                                                                                                      2000US-0256719P
                                                                                                                                                                                                                              2000US-0251479P
                                                                                                                                                                                                                                                   08-DEC-2000; 2000US-0251856P.
08-DEC-2000; 2000US-0251868P.
                                                                                                                                                                                                                                                                                                    08-DEC-2000; 2000US-0251869P,
08-DEC-2000; 2000US-0251989P,
                                                                                                                                                                                                                                                                                                                                                      2000US-0251990P,
2000US-0254097P,
                                                                                                                                                                                                                                                                                                                                                                                                          2001US-0259678P.
                                                                                                                                                                                                                                                                                                                                                                                                                               17-JAN-2001; 2001US-00764877.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84 TTGGCATGGCTAAGGGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rosen CA, Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-090458/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                     01-DEC-2000;
05-DEC-2000;
05-DEC-2000;
05-DEC-2000;
06-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                              11-DEC-2000;
                                                                                                   01-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAR-2003
05-DEC-1990
                                                                         17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAN81564;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
AAN81564/c
XX
AC
AAN8156
AC
AC
AAN815
DT
05-DEC
XX
XX
DB
Genomic
XX
XX
Human 1
XX
XX
KW
Human 1
XX
XX
FF
FF
EX
```

Matches

ઠે 유 ö

Gaps

```
sapiens.
                                                                                                                                               26-JUN-1986;
                                                                                                                                                    27-JUN-1985;
                                                                                                                     polyA_signal
                                                                                                                             polyA_signal
                                                                                                                                           25-MAR-1987
                                                                                                                                       EP215548-A
                                                                                                                                 polyA_site
                                                                                                                         polyA_site
                intron
                                                           intron
                                                                         intron
                                                                                        intron
                              intron
                                             intron
                                                                                                      intron
      Key
exon
  Homo
                      exon
                                    exon
                                                   exon
                                                                 exon
                                                                                exon
                                                                                              exon
                                                                                                             exon
```

```
A lambda gt cDNA library was prepared from human liver mRNA. The library was screened with iodine-125 labelled antibody to human protein C. A cDNA which lacked the coding sequence for the pre-pro peptide and the forst 23 amino acids of protein C was lablated and used as a hybridisation probe. The remainder of the coding sequence was obtained from a human genomic. PNA library in lambda Charon 4A. Recombinantly produced protein C can be used to treat thrombotic disorders such as venous thrombosis. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                     Human protein C or activated protein C - prepd. using expression vector capable of integration in mammalian host cell DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human, tissue specific, diagnosis, brain, heart; skeletal muscle; lung, liver, uterus; ovary; stomach; intestine; kidmey; pancereas, ss; metabolic disease; developmental disease; cytostatic; immunomodulacry; neuroprotective; gene therapy; cancer; immunopathology; neuropathology.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAH57161 to AAH57576 represent cell and tissue specific polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New cell and tissue specific polynucleotides useful for diagnosis, prognosis or monitoring of treatments for disorders where the gene associated with a cancer, immunopathology or neuropathology.
                                                                                                                                                                                                                                                                                                                                                                    Sequence 11724 BP; 2445 A; 3302 C; 3370 G; 2607 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                 Score 15.8; DB 1; Length 11724;
Pred. No. 3.3e+02;
4; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human liver cell specific cDNA sequence SEQ ID NO:337.
                                                                         Davie EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watson GA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 254-257; 327pp; English
                                                                         Foster DC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                   Claim 2; Page 33; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH57497/c
ID AAH57497 standard; cDNA; 11724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-NOV-2000; 2000WO-US030396.
85US-00766109
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 73.7%;
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seilhamer JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                            (ZYMO ) ZYMOGENETICS INC (UNIW ) UNIV WASHINGTON.
                                                                         Murray MJ, Berkner KL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-291057/30.
                                                                                                     WPI; 1987-081505/12.
P-PSDB; AAP70855.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200132927-A2
15-AUG-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sornasse T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-MAY-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH57497;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note= "encodes amino acids 137 to 184"
1396. 9267
4 tag= 1
number= 6
268. 9385
                                                                                                                                                                  464. .3630
*tag= c
number= 2
note= "encodes amino acids -19 to +37"
(631. .5092
                                                                                           note= "encodes amino acids -42 to -20"
:201, .3463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag= o
number= 8
note= "encodes amino acids 224 to 419"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note= "encodes amino acids 185 to 223"
1386. .10514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note= "encodes amino acids 92 to 136"
585. .8252
                                                                                                                                                                                                                                                                                                                                                                                    1210. .5347
*tag= g
number= 4
note= "encodes amino acids 46 to 91"
1348. .5449
                                                                                                                                                                                                                                                                                                                       note= "encodes amino acids 38 to 45"
118. .5209
                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= n
/number= 7
10515. .11104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1151. .11156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .11385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86EP-00304970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85US-00749600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= ]
/number= 5
8253. .8395
/*tag= k
/number= 6
                                                                                                                                                                                                                                                                           5093. .5117
*tag= e
'number= 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               number= 4
5450. .5584
/*tag= i
/number= 5
                                                                                                                                                                                                                                                               number= 2
                                                                                                                                                                                                                                                                                                                                                                         number= 3
                                                                                                                                      tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *tag= m
number=
                                                                                                                                                        number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *tag=
1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tag=
```

ô

Gaps

ö

18

```
38-APR-1994;
                                                                                                          polyA_signal
                                                                                                                                                           polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ното варіеля
                                                                                                                                                                                                                                    US5516650-A.
                                                                                                                                                                                                                                                                                  14-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                     27-JUN-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT79723;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAT79723/
          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
sequences (I). (I) can have cytostatic, immunomodulatory and neuroprotective activities, and can be used in gene therapy. (I) and proteins (II) encoded by then are used in high throughput screening assays to select DNA molecules, RNA molecules, peptide nucleic acids, mimetics, immunogloulins, inhibitors, artagonists, antibodies or their fragments, immunogloulins, inhibitors, drug compounds and pharmaceutical agents. Expression of (I) in a sample indicates the differentiation of embryonic stem cells into a tissue selected from brain, heart, kidney, liver, lung, skeletal muscle or pancreatic tissues. (I) and (II) are used to produce an expression profile that defines a metabolic or developmental process, treatment, condition, disease or disorder. The gene profile can be used for diagnosis, prognosis or monitoring of treatments and for investigating a preclisposition to a disorder where the gene is associated with a cancer, immunopathology or neuropathology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= m//note= "base 9268 is given as 'y' in the specification" 9269: - 9386 /*tag= n/*tag= n/*tag= m/*tag= m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                     Sequence 11724 BP; 2443 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Activated protein C; serine protease; thrombosis; thrombolytic; fibrinolytic; antithrombotic; blood clotting; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 15.8; DB 4; Length 11724; Pred. No. 3.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .2133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codon start= 2131.
2551. .3463
*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT32796 standard; DNA; 11725 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= d
5093. --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= 1
5583. °.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
,4.tag= ;
8253. /*t*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .ag= b
3464. .3630
/*tag= c
631
                                                                                                                                                                                                                                                                                                                                                                                                                                    79.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8253. 8395
/*tag= k
8395. 9268
/*tag= 1
9268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .5347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .2250
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 73.7%
warrhes 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
5210. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
3348. .!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human protein C gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
05-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAT32796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT32796/C
XX
XX
ACT33
DT 25-NM
DT 25-NM
DT 25-NM
DT 05-NM
DT 05-N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
```

```
A genomic DNA fragment (AAT32796) codes for human full-length protein C (AAM02600), a zymogen of a serine protease that plays an important role in blood clotting and in the generation of fibrinolytic activity in vivo. It was obtd. from a human genomic library in phage Charon 4A using a partial cDNA clone as probe. A complete cDNA clone (AAT32795) was also produced, Protein C-encoding nucleic acids can be used for large-scale prodn. of protein C, or variants modified to improve cleavage between the heavy and light chains of the circulating intermediate. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New DNA encoding modified forms of opt. activated protein C - and related transformed cells for prodn. of recombinant protein C for use e.g. as an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein C, transgenic animal; sheep; rabbit; cattle; goat; milk;
blood clotting; anticoagulant; human; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11725 BP; 2444 A; 3295 C; 3372 G; 2613 T; 0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79.0%; Score 15.8; DB 2; 73.7%; Pred. No. 3.3e+02; iive 4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Murray MJ, Berkner KL, Foster DC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Fig 4A-D; 34pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT79723 standard; DNA; 11725 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 BKSGCAUGGCUAAGGGACC 19
                                                                               p
.11157
                                                                                                                                                                                                                                                                                                                                                                                    85US-00749600.
86US-00924462.
87US-00130370.
89US-00317205.
                               0.11725
                                                                                                                                  q
.11386
.10515
                                                                                                                                                                                                                                                                                                                                       94US-00225253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90US-00582131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92US-00987532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-DEC-1997 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ZYMO ) ZYMOGENETICS INC
                                                                             /*tag=
11152.
/*tag=
11381.
/*tag=
                             /*tag=
10516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         anti-thrombotic agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human protein C gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1996-251006/25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; AAW02600.
                                                                                                                                                                                                                                                                                                                                                                                                                  29-OCT-1986;
08-DEC-1987;
28-FEB-1989;
```

877 GGCGCATGGCAAAGGGACC 859

셤

/\*tag= c 5118. .5209 /\*tag= d 5210. .5347 /\*tag= e 5348. .5449

.5584 .8252

/\*tag= 5450. .5 /\*tag= 5585. .6

```
(AAMA25086). A claimed method for producing human protein C in the milk of a transgenic animal involves: (a) providing a DNA construct comprising DNA encoding a secretion asgnal and a protein C propeptide, operably linked to DNA encoding two chain cleavage site-modified protein C, the 2 DNA sequences being linked to elements required for protein C, the 2 DNA sequences being linked to elements required for protein C expression in a mammary gland of a host female animal, esp. the beta-lactoglobulin gene promoter (see AAT79725), and (b) using the DNA construct to breed a transgenic animal (esp. sheep, rabbit, cattle, goat) that produces protein C in its milk, at least 90% of the protein C being in the two-chain form. Modification of the protein C two-chain cleavage site (see chain form. Also claimed is a non-human mammalian embryo containing in its nucleus a heterologous DNA segment encoding cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Production of protein C in transgenic animal - useful for high quantity protein C production with therapeutic value.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence comprises human genomic DNA encoding protein C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11725 BP; 2444 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 6; Page 49-58; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ZYMO ) ZYMOGENETICS INC. (PPLT-) PPL THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             containing in its nucler
site-modified protein C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1997-310599/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; AAW25086
                                                                                                                                                                                                                                                                                                                                                                                                                                  30-NOV-1995;
13-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                  WO9720043-A1
                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prunkard DE;
                                                                                                                                                                                                                                                                                                                                                                              05-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Garner I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rhis DNA
                                                                intron
                                                                                                                                                                                                                                                                                  intron
               intron
                                                                                                                     intron
                                                                                                                                                                         intron
                                                                                                                                                                                                                              intron
                                                                                            exon
                                                                                                                                                exon
                                       exon
                                                                                                                                                                                                    exon
                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                              exon
```

96WO-US018866 95US-00565074 96US-0019692P

9269. 9386 /\*tag= k 9387. .10515 /\*tag= l 10516. .11102 /\*tag= m

8253. 8395 /\*tag= i 8396. 9268

/\*tag= 9269.

/\*tag= 8253. .{

Cottingham I, Temperley SM, Foster DC, Sprecher CA;

```
AAZ32159 to AAZ32194 represent reference alleles for specifically claimed nucleic acid sequences from the present invention which comprise polymorphic sites as given in a table in the specification, selected from 92 single nucleotide polymorphisms in which the nucleotide at the polymorphic site is different from a nucleotide at the same site in a reference allele. The nucleic acids, and primers and probes, are used to identify polymorphisms, which may predispose an individual to disease, especially a vascular disease. They can also be used in phenotype correlations, forensics, paternity testing, medicine or genetic analysis. AAY49550 to AAY49573 represent the proteins which correspond to some of
                                                                                                                                               Human, coding sequence polymorphism; vascular pathology gene;
polymorphic site; phenotype correlation; forensic; paternity testing;
medicine; genetic analysis; vascular disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Determination of polymorphisms in genes, especially those identifying predisposition to vascular disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 11725 BP; 2444 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                     Rozen SG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79.0%; Score 15.8; DB 2; 1
73.7%; Pred. No. 3.38+02;
ive 4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                    Cargill M, Ireland JS,
                                                                                                                                                                                                                                                                                                                                                                                      (WHED ) WHITEHEAD INST BIOMEDICAL RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Search completed: March 15, 2005, 11:20:24 Job time: 114.702 secs
                                                                                                               Human protein C nucleotide sequence.
             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 23; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGACC 19
             AAZ32179 standard; cDNA; 11725
                                                                                                                                                                                                                                                                                                                     99WO-US006473.
                                                                                                                                                                                                                                                                                                                                                     98US-00054272.
                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 73.7
les 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       Lander ES, Daley GQ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the reference alleles
                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-620066/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAY49560
                                                                                                                                                                                                                                                                                                                     26-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                     01-APR-1998;
                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                   W09950454-A2
                                                                                13-JAN-2000
                                                                                                                                                                                                                                                                                    07-OCT-1999.
                                               AAZ32179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
AAZ32179,
                                 $XXCCCCCCCCX8X44X488X1X4X1X6X8X8X8X8X8X8X8X8X8X8X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
```

ö

ö

Gaps

; 0

Length 11725; Indels

79.0%; Score 15.8; DB 2; 73.7%; Pred. No. 3.3e+02; iive 4; Mismatches 1;

Local Similarity 73.7 nes 14; Conservative

Matches

Query Match

THIS PAGE BLANK (USPIC).

```
Aa257636 Trans-act
Aa257637 Trans-act
Aa257637 Nucleotid
Aav88169 EST clone
Abb351814 Human mdd
Abb36291 Human pol
Aa150621 Human pol
Aa150831 Human pol
Aa158835 Human pol
Ad48816 Novel hum
Abk43595 DNA encod
Ad15398 cDNA encod
Ad15398 cDNA encod
Aa15394 Human cDN
Aah16046 Human cDN
                                                                                                     March 15, 2005, 01:00:51; Search time 315.5 Seconds (without alignments) 1069.494 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aaz57638 Trans-act
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                    ggguccaccuccucgcggun.......ggggcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                              8780412
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                         4390206 segs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                     - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ57636
AAZ57637
AAZ57639
AAV88169
AAS51814
AAB33339
ABL90291
AAI58835
ADQ99056
                                                                                                                                                                                                                                                    IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqn2003cs:*geneseqn2003ds:*geneseqn2004as:*geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genesequ2000s:*
genesequ2001bs:*
genesequ2001bs:*
genesequ2002s:*
genesequ2003as:*
genesequ2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N_Geneseq_16Dec04:*
.: geneseqn1980s:*
:: geneseqn1990s:*
                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                           US-09-699-667E-62
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                      Scoring table:
                                                                     OM nucleic
                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
No.
```

AAH16046 AAH15794

AAV54124 AAS21257 ACA03616 ABX89154

Acd41808 Human sec Aca04037 Human CDN Ada184546 Novel hum Ada186126 Human PRO Ada186126 Human PRO Adb19035 Novel hum Adb27576 CDNA enco Ada86055 Novel hum Adb15619 Human PRO Ada7405 Human PRO Ada67200 Human PRO Ada67200 Human PRO Ada930207 CDNA enco Ada8503 Novel hum Adb10201 CDNA enco Ada8503 Novel hum Adb16360 Human PRO Ada914515 Human PRO Ada914515 Human PRO Ada14515 Human PRO Ada14515 Human PRO Ada14515 Human PRO Adb16360 Human PRO Adb16360 Human PRO Adb16360 Human PRO Adb16360 Human PRO Adb18519 Human PRO Adb18587 Novel hum Adb18587 Novel hum Adb19587 Novel hum	SINIS				ne nucleotide sequence.	ne; viral RNA cleavage;			stranded region with bases 52-57"		BubBtrate Dases (AA25/641) 5-11"	stranded region with bases 6-1"						ine D;
ACD41808 ACA04037 ADA45546 ADA75977 ADA18627 ADA61250 ADA61250 ADA67519 ADA67519 ADA67200 ADA	ALIGNMENTS				ribozyme	ribozyme		iers	double s	į	"SP1.1	double						Lafontaine
ACD41 ADA46 ADA46 ADA61 ADB27 ADB27 ADB37		ВР.			Lta	lta		11f	rms d		τy=	8 8			Ŀ	<u>.</u>		
<b> </b>		57 1		ŝ,	del	del		/Que	0		อ	u e Forms			0391	0203		ch S
22 22 22 22 22 22 22 22 22 22 22 22 22		; RNA;		vised) rst entry)	antigenomic	genomic ; BB.		Ĕ	=		E	/ rag= 5257 /*tag= /note= "			9WO-CA000391	98CA-0223	SHERBROOKE.	Ananvoranich
		ard		(revi	nti	anti	rus	й <b>~</b> \	. ~ ~ ~	~~~	- m -	- W			99	98	HER	Ana
		tandard		m 0		ing a dise	οvi	би		ng		ρ	-A2.	·	÷	<u></u>		
audadadadadadadadadadadada		8	.,	2003	acting	actir ted d	Φ	ndir	α̈́o	bindir	ď	binding.		1999	1999	1998	UNIV	lt J
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1 8 25763	25763	-SEP-	ans-	ans-	Hepatiti	y sc_bi	em_loop	ຜູ່	em_loop	ຜູ່	WO9955856	-NOV-	-APR-	-APR-	(UYSH)	Perreaul
00000000000000000000000000000000000000		ULT 5763 AA	A	15	Tr	Tr	He	a, K	Bt	щį	8	Ë	3	04	29	29	5	Pe
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RESI AAZ: ID	X Z	<b>###</b>	<b>注图</b>	<b>(22)</b>	18×	Ett	111	222	EEE	FT FT mi	X Z S	(윤)	<b>1</b>	ž # }	<b>18</b> 3	X E S
;																		
				•					•									

Lafontaine D;

```
Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57637
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                 This is the nucleotide sequence of a trans-acting antigenomic delta hazbozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AA55641). The invention relates to a nucleic acid enzyme (e.g. deltaZeP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'«GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate of cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave that RAA our RAA causing for example an inherited disease. The applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l. .6
/*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20. .25
/*tag= c
/bound moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGCCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                           New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trans-acting antigenomic delta ribozyme; viral RNA cleavage;
inherited disease; deltaRzPl.1; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 57; DB 3; Length 57; Best Local Similarity 89.5%; Pred. No. 2.9e-07; Matches 51; Conservative 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                    diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                             Example 1, Fig 2; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57636 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98CA-02230203.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZS7636
AAZS7636
AAZS7636
AAZSAX
AAZ
    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
ö
                                                                                                                                This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN'5'. The substrate of the enzyme has the sequence S'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20. .25
/*tag= c
/bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
30. .45
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*teg= d
52. .57
//*tote= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 edeuccaccuccucececeunnnnuegecaueccuucegecaugecuaageaccc 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ch 83.2%; Score 47.4; DB 3; Length 57; 1 Similarity 78.9%; Pred. No. 0.00032; 45; Conservative 6; Mismatches 6; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                             diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ocation/Qualifiers
                                                                                      Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= a
/note= "Forms o
7..19
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ57637 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-CA000391,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loca
Matches
```

us-09-699-667e-62.std.rng

```
Perreault J,
                          29-APR-1999;
                                                      29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9845437-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-APR-1997;
 04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV88169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                              This is the nucleotide sequence of ribozyme deltaRzPl.2. This ribozyme cleaves substrate SPl.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzPl.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN'5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the clearage is not shown in the specification, but has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                 This
from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /bound_molety= "RzB fragment of bimolecular ribozyme" /note= "Porms double-stranded region with bases 20-16 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /bound_moiety= "Ribozyme substrate P1.1"
/note= "Forms double-gtranded region with bases 11-6 of
sequence AAZ57641"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /bound_moiety= "RzB fragment of bimolecular ribozyme" /note= "Forms double-stranded region with bases 8-1 of sequence AAZ57640"
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCCCGCGGUCCCAGCUGGGCAUGCGGCUUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                  New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                                                                                                                                                                                                Match 83.2%; Score 47.4; DB 3; Length 57; Local Similarity 78.9%; Pred. No. 0.00032; les 45; Conservative 6; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleotide sequence of bimolecular ribozyme RzA fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bimolecular ribozyme; viral RNA cleavage; RzA fragment;
                                                                                                                                                                                                                                                                                                                                                     Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
              Lafontaine
                                                                                diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                         Example 1; Page; 52pp; English
            Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57639 standard; RNA; 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ಹ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20. .25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inherited disease; ss
                                       WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
misc_binding
              Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stem_loop
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57639;
                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
```

```
This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to an ucleic acid enzyme (e.g. delteRzPl.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNXXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3'-to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Expressed sequence tag; secreted protein; haematopoiesis regulator; itsue growth, activin; infilbin; tumour invasion suppressor; EST; human; chemotaxis; chemokinesis; haemostasis; gene therapy; thrombolysis; receptor; ligand; anti-inflammatory; tumour inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                             New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Treacy M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Merberg D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3; Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Racie LA,
                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 82.4%; Pred. No. 5;
Matches 28; Conservative 6; Mismatches
                                                                                                                                        Lafontaine
                                                                                                                                                                                                                                                     diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lavallie ER,
                                                                                                                                                                                                                                                                                                Example 5; Fig 4; 52pp; English.
                                                                                                                                     Ananvoranich S,
99WO-CA000391
                                             98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV88169/c
ID AAV88169 standard; cDNA; 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98WO-US006956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-00837312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jacobs K, Mccoy JM, Lava
Spaulding V, Agostino MJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-FEB-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GEMY ) GENETICS INST INC.
                                                                                     (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MPI; 1999-070078/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST clone DT470.
```

ö

Human; molecule for disease detection and treatment; MDDT; cancer; cell proliferative disorder; arteriosclerosis; asthma; autoimmune disorder; inflammatory disorder; Crohn's disease; multiple sclerosis; cytostatic; antiarteriosclerotic; antiinflammatory; hepatotropic; immunosuppressive; antiasthmatic; gene therapy; gene; ss Human mddt cDNA Incyte ID No: LI:199716.6:2001JAN12. Panzer SR, Lincoln SB, Altus CM, Dam TC, Liu TF, Harris B, Flores Chang SC, Gerstin EH, Peralta CH, ABS51814 Btandard; cDNA; 1404 BP 12-JAN-2001; 2001US-0261622P. 16-JAN-2001; 2001US-0261865P. 17-JAN-2001; 2001US-0262208P. 17-JAN-2001; 2001US-0262209P. 17-JAN-2001; 2001US-026302P. 19-JAN-2001; 2001US-0263063P. 19-JAN-2001; 2001US-0263065P. 09-JAN-2002; 2002WO-US001008 INCY-) INCYTE GENOMICS INC. (first entry) WPI; 2002-590679/63. WO200255738-A2 Homo sapiens 21-OCT-2002 18-JUL-2002 ABS51814; Query Match Matches ઠ

```
The present invention relates to the isolation of novel human molecules for disease detection and treatment (MDDT), and the polynucleotide sequences (mddt) encoding them. The MDDT polypeptides may be used to screen for molecules that bind to, or are bound by the encoded conjuppeptides, and to develop a transcript image of a tissue or cell type. Probes comprising at least 20 nucleotides of the mddt polynucleotide may be used to assess the toxicity of a test compound. The MDDT polypeptides and mddt polynucleotides are useful in the diagnosis, study, prevention and treatment of diseases associated with the expression of molecules for disease detection and treatment. Such disorders include cell proliferative disorders (e.g. asthma, Crohn's disease, or and autoimmune/inflammatory disorders (e.g. asthma, Crohn's disease, or multiple sclerosis). The mddt polynucleotides may also be used as molecule markers, in microarrays, and in sometic or germline gene contents.
                                                           polypeptides, useful in diagnosing, studying, preventing or treating diseases associated with MDDT expression, e.g. autoimmune or inflammatory
                        New disease detection and treatment molecule (MDDT) polynucleotides and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1404 BP; 373 A; 268 C; 289 G; 474 T; 0 U; 0 Other;
                                                                                                                                                                                                Claim 1; Page 106-107; 129pp; English.
                                                                                                                                 disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                        The present sequence represents an expressed sequence tag (EST), and is a polynucleotide of the invention. The polynucleotides of the invention are all secreted EST sequences isolated from a variety of human tissue sources. The EST sequences and proteins encoded by them are predicted to have useful biological activities which would make them suitable for treating, preventing or ameliorating medical conditions in humans and animals, although no supporting data is given. Suggested activities include nutritional activity, immune stimulating or suppressing activity, haematopoiesis regulating activity, tissue growth activity, haemostatic and thrombolytic activity, chemotextic/chemokinetic activity, activity, activity, activity, activity, activity, activity, activity activity, undur invasion suppressor activity, tumour inhibition activity. The EST sequences are also stated to be useful for gene therapy
                               proteins - derived from e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG 53
                        New polynucleotides encoding human secreted proteins - derived fr
human blood, kidney, foetal lung, placenta, testes, brain, ovary,
pituitary, retina and colon cDNA libraries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.5%; Score 32.2; DB 2; Length 267; 50.9%; Pred. No. 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 267 BP; 65 A; 69 C; 67 G; 66 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Mismatches
                                                                                                                                                                    Claim 1; Page 306; 641pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 50.9 tes 27; Conservative
```

ö AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers. Gaps 747 23 colon cancer antigen; diagnosis; detection; ö 1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG DB 6; Length 1404; 13; Indels Human colon cancer antigen encoding cDNA SEQ ID NO:595. 56.5%; Score 32.2; E 50.9%; Pred. No. 49; :ive 13; Mismatches Rosen CA; Claim 1; Page 2645; 9803pp; English. AAH33539 standard; cDNA; 1430 BP. Birse CE, 99US-0157137P. 28-SEP-2000; 2000WO-US026524. (HUMA-) HUMAN GENOME SCI INC. (first entry) Local Similarity 50.9 les 27; Conservative colorectal carcinoma; ss Ruben SM, Barash SC, Human; colon cancer; 2001-235357/24. P-PSDB; AAG74108 WO200122920-A2 Homo sapiens. 29-SEP-1999; 03-NOV-1999; 03-SEP-2001 05-APR-2001. AAH33539; Query Match AAH33539/c 셤

Ř,

Jones Chen

Dufour GE, Hillman JL, V, Daffo A, Marwaha R, David MH, Lewis SA;

P-PSDB; ABG70341

```
cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally. N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal sequences used in the examplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027
   proteins are collectively known as colon cancer antigens. The colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                  to 1052, 7921 and 7922
```

Sequence 1430 BP; 494 A; 227 C; 260 G; 446 T; 0 U; 3 Other;

```
ö
                         Gaps
                                                                 46
                                             23
                                                        ö
                                            1 GGGUCCACCUCCUCGCGGUNNNNNNUGGCCAUGCCUUCGGCCAUGGCUAAGGG
   DB 4; Length 1430;
                      13; Mismatches 13; Indels
             49;
  56.5%; Score 32.2; 50.9%; Pred. No. 49
Query Match
Best Local Similarity 50.9°
Matches 27; Conservative
                                                                   98
                                                                 g
                                              Š
```

Human polynucleotide SEQ ID NO 853. ABL90291 standard; cDNA; 1430 BP (first entry) 24-MAY-2002 ABL90291; RESULT 8

antiallergic; hepatorropic; antidiaberic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibecterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein; gene; ss. nootropic; neuroprotective; antiviral; Cytostatic; immunosuppressive;

Homo sapiens

WO200190304-A2

29-NOV-2001

19-MAY-2000; 2000US-0205515P

18-MAY-2001; 2001WO-US016450.

SCI INC (HUMA-) HUMAN GENOME

Rosen CA CE, Birse

WPI; 2002-122018/16. P-PSDB; ABB89882.

Novel 1405 isolated polypeptides, useful for diagnosis, treatment and prevention of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders.

Claim 4; SEQ ID NO 853; 2081pp + Sequence Listing; English.

The invention relates to novel genes (ABL89449-ABL90853) and proteins (ABB89040-ABB90444) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are 1solated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant) agonists are useful in

```
ö
the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple solerosis, rheumatoid arthritis and ulcerative colitis, (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infections Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from NIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ě,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang D;
Zhao Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                  46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ren F, Wa
Zhang J,
                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                              6; Length 1430;
                                                                                                                                                                                                Sequence 1430 BP; 494 A; 227 C; 260 G; 446 T; 0 U; 3 Other;
                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qian XB,
Yang Y,
                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Υ,
ΑJ,
                                                                                                                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                            56.5%; Score 32.2; 1
50.9%; Pred. No. 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; SEQ ID NO 4610; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liu C, Asundi V, Chen R, fang Z, Wehrman T, Xu C, Goodrich R, Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human polynucleotide SEQ ID NO 4610.
                                                                                                                                                                                                                                                                                                                                                                                              AA160621 standard; cDNA; 1878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-00488725.
2000US-00552317.
2000US-00598042.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-2000; 2000US-00620312.
03-AUG-2000; 2000US-00653450.
14-SEP-2000; 2000US-00662191.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-DEC-2000; 2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-OCT-2000; 2000US-00693036.
29-NOV-2000; 2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                      Ouery Match
Best Local Similarity 50.9°
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wang Z, Wel
Goodrich R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-442253/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; AAM41465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200153312-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             leukaemia; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JAN-2000;
25-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang YT,
Wang J, V
                                                                                                                                                                                                                                                                                                                                                                                                                           AAI60621;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HXSE-)
                                                                                                                                                                                                                                                                                                                                                                                 AAI60621/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ношо
                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                               888888888888888
                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                          à
```

Claim 1; SEQ ID NO 1038; 10078pp; English.

```
The invention relates to human nucleic acids (AAIS7798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as
                                                                                                                                                                                                                                                                                                                  Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                            Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         part of the printed specification
      8888888888888888888888
```

ö Gaps ô 1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG 56.5%; Score 32.2; DB 4; Length 1878; 50.9%; Pred. No. 53; Sequence 1878 BP; 594 A; 329 C; 358 G; 597 T; 0 U; 0 Other; 13; Indels 13; Mismatches 27; Conservative Query Match Best Local Similarity Matches g

AAI58835 standard; cDNA; 1927 BP (first entry) 22-OCT-2001 AAI58835; AA158835/
XX AC AA15
XXX AA15
XXX AA15
XXX Huma
XXX Huma
XXX Huma
XXX Huma
XXX Chem

Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; Human polynucleotide SEQ ID NO 1038.

peripheral nervous system, neuropathy; central nervous system; CNS; Alzhaimer's; Parkinson's disease; hautington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-brager Syndrome; chemocactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation; eukaemia; ss

Homo sapiens

WO200153312-A1

26-JUL-2001.

26-DEC-2000; 2000WO-US034263

23-DEC-1999; 99US-00471275. 21-JAN-2000; 2000US-00488725. 25-AFR-2000; 2000US-00552117. 20-UUN-2000; 2000US-00598042. 19-UUL-2000; 2000US-00620112.

2000US-00662191. 2000US-00693036. 2000US-00727344 14-SEP-2000; 29-NOV-2000; 19-OCT-2000

HYSE-) HYSEQ INC.

Ren F, Wang D; Zhang J, Zhao QA; Qian XB, Yang Y, Liu C, Asundi V, Chen R, Ma Y, (Wang Z, Wehrman T, Xu C, Xue AJ, Goodrich R, Drmanac RT; Liu C, Asundi V, Tang YT, Wang J, Zhou P,

WPI; 2001-442253/47 P-PSDB; AAM39679 Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries.

```
ô
                                            The invention relates to human nucleic acids (AAIS7798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injurishes, peripheral nervous localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral socierosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention describes an isolated polynucleotide (I) comprising a fully defined (S1) of 749, 3188, 2484, 1169, 2936, 1467, 5773, 5714, 4041, 1372, 3996, 3945, 2735, 1788, 585, 1782, 927, 5714 or 2282 nucleotides as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New G-protein-coupled receptor-like polypeptides and polynucleotides, useful for treating diseases of ophthalmic, neurological, immunological and nephritic systems and hormonal dysfunction, cancer, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ophthalmological; immunomodulatory; cytostatic; antiatherosclerotic; antidiabetic; GPCR-like protein; ophthalmic disorder; neurological disorder; immunological disorder; nephritic disorder; nehormonal dysfunction; cancer; atherosclerosis; diabetes; molecular weight marker; food supplement; human; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                       56.5%; Score 32.2; DB 4; Length 1927; 50.9%; Pred. No. 53; ive 13; Mismatches 13; Indels 0
                                                                                                                                                                                                                                                                                                                                                    Sequence 1927 BP; 615 A; 327 C; 367 G; 618 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA encoding human GPCR-like protein segid 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 2; SEQ ID NO 726; 92pp; English.
                                                                                                                                                                                                                                                                                                                 part of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADQ99056 standard; cDNA; 1927 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drmanac RT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUL-2000; 2000US-00620312.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 50.9%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-442255/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US6569662-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-MAY-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADQ99056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADQ99056/
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

ö

13; Indels

13; Mismatches

27; Conservative

```
Matches
                                                                                                                                                                                                                                  ö
             extracellular portion or its active domain. The GPCR-like polypeptides and polynucleotides are useful for the treatment of diseases of ophthalmic, neurological, immunological and nephritic systems. They may also be used to treat hormonal dysfunction, cancer, atherosclerosis and diabetes. The antibodies are useful for detecting or quantitating the polypeptide in tissue. The polypeptides can also be used as molecular weight markers and as a food supplement. This sequence represents a human polynucleotide of the invention.
given in the specification, its translated or protein coding portion, its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a polynucleotide comprising a sequence given in the specification, or its mature protein.-coding portion, or its complement. The polynucleotide is useful for treating diseases e.g., cancer or neurodegenerative diseases and many others listed in the specification. The present sequence represents a novel human cDNA. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPTO
                                                                                                                                                                                                                                                                                  594 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGGCATGGCTAAAGG 542
                                                                                                                                                                                                                                                                 53
                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  useful for treating diseases e.g., cancer
                                                                                                                                                                                              56.5%; Score 32.2; DB 5; Length 1927; 50.9%; Pred. No. 53; ive 13; Mismatches 13; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 9; Length 1927;
                                                                                                                                                                 Seguence 1927 BP; 615 A; 327 C; 367 G; 618 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1927 BP; 615 A; 327 C; 367 G; 618 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    segdata.uspto.gov/seguence.html?DocID=20030104529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drmanac RT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BB; cancer; neurodegenerative disease; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 32.2; 1
Pred. No. 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 726; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Asundi V,
                                                                                                                                                                                                                                                                                                                                             RESULT 12
ADB48816/c
ID ADB48816 standard; cDNA; 1927 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel human cDNA SEQ ID NO 726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JAN-2000; 2000US-00488725
25-APR-2000; 2000US-00552317
19-JUL-2000; 2000US-00620312.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-JAN-2002; 2002US-00037270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New polynucleotide, useful neurodegenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ບັ
                                                                                                                                                                                                                                                                                                                                                                                                                                                04-DEC-2003 (first entry)
                                                                                                                                                                                                                                27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LIU C.
ASUNDI V.
DRMANAC R T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-678194/64.
                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZHOU P.
TANG Y T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US2003104529-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                 ADB48816;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TANG/)
(LIUC/)
(ASUN/)
(DRMA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZHOU/)
                                                                                                                                                                                                                                  Matches
88888888888888
```

```
Central nervous system; CNS; autoimmune disease; rheumatoid arthritis; hyperproliferative disorder; neoplasm; cardiovascular disorder; cardiac arrest; cerebrovascular disorder; ischaemia; angiogenesis; nervous system disorder; Alzeimer's disease; AlDS; ocular disorder; acquired immunodeficiency virus; dysphagia; gastrointestinal disorder; adenocarcinoma; reproductive system disorder; testicular feminisation; endocrine disorder; dabetes; cancer; leukaemia; neovascularisation; respiratory disorder; renal disorder; kidney failure; blood disorder; myocardial infarction; wound healing; cell proliferation; skin aging; food additive; food preservative; gene therapy; gene; ss.
53
             594 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGCCATGGCTAAAGG
1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                 DNA encoding novel central nervous system protein #175.
                                                                  ABK43595/c
ID ABK43595 standard; cDNA; 2206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0225213P.
2000US-0225214P.
2000US-0225266P.
2000US-0225267P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000US-0214886P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   000US-0225270P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  000US-0224519P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      000US-0225758P.
                                                                                                                                                                                                                                                                                                                                                                     17-JAN-2001; 2001WO-US001332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000US-0225759P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         000US-0227009P
                                                                                                                           05-JUN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000US-02
                                                                                                                                                                                                                                                                                                                          WO200155318-A2.
                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-AUG-2000;
01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                02-AUG-2001
                                                                                                     ABK43595;
                      임
  8
```

2000US-0229287P

```
01-SEP-2000; 20000S-0229345P.

01-SEP-2000; 20000S-0229345P.

05-SEP-2000; 20000S-0229509P.

06-SEP-2000; 20000S-0229513P.

06-SEP-2000; 20000S-0230431P.

08-SEP-2000; 20000S-0231243P.

08-SEP-2000; 20000S-0231244P.

08-SEP-2000; 20000S-0231244P.

08-SEP-2000; 20000S-0231413P.

08-SEP-2000; 20000S-0231413P.

08-SEP-2000; 20000S-0231413P.

08-SEP-2000; 20000S-0231413P.

08-SEP-2000; 20000S-0231413P.

08-SEP-2000; 20000S-0231413P.

14-SEP-2000; 20000S-0231413P.

14-SEP-2000; 20000S-023198P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20000S-0246523P.
20000S-0246524P.
20000S-0246525P.
20000S-0246526P.
20000S-0246526P.
                                                                                                                                                                                                                                                                                                           2000US-0232397P.
2000US-0232398P.
2000US-0232399P.
2000US-0232400P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0234274P.
2000US-0234274P.
2000US-0234997P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-SEP-2000; 2000US-0235836P.
29-SEP-2000; 2000US-0235837P.
29-SEP-2000; 2000US-023636PP.
29-SEP-2000; 2000US-0236368P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0241785P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-NOV-2000; 2000US-0246528P.
08-NOV-2000; 2000US-0246532P.
08-NOV-2000; 2000US-0246609P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0233065P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0235484P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0237038P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0241221P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0241787P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0241808P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0246478P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0241809P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0244617P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0246477P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0246610P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0249207P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0249211P
2000US-0249212P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-0CT-2000; 202-0CT-2000; 202
                                                                                                                                                                                                                                                                                                                                                     14-SEP-2000;
14-SEP-2000;
14-SEP-2000;
14-SEP-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-SEP-2000;
25-SEP-2000;
25-SEP-2000;
26-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-SEP-2000;
29-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                     14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-NOV-2000
```

```
New isolated nucleic acid encoding a protein for diagnosing, preventing, treating or ameliorating medical conditions and used as food additives or preservatives.
                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 185; 837pp; English
                                                                                                                                                                                                                                  Rosen CA, Barash SC, Ruben SM
                     2000US-0249216P.
2000US-0249217P.
2000US-0249218P.
              000US-0249215P.
                                             2000US-0249244P
                                                                                                             2000US-0250391P.
                                                                                                                           2000US-0251988P.
2000US-0256719P.
                                                                                                                                                                                                                  (HUMA-) HUMAN GENOME SCI INC.
                                                       2000US-0249245P
                                                             2000US-0249264P
                                                                      000US-0249265P
                                                                                     2000US-0249299P
                                                                                             2000US-0249300P
                                                                                                     2000US-0250160P
                                                                                                                   2000US-0251030P
                                                                                                                                            2000US-0251479P
                                                                                                                                                    2000US-0251856P
                                                                                                                                                          2000US-0251868P
2000US-0251869P
                                                                             2000US-0249297P
                                                                                                                                                                            2000US-0251989P
                                                                                                                                                                                   2000US-0251990P
                                                                                                                                                                                                  05-JAN-2001; 2001US-0259678P
                                                                                                                                                                                                                                                WPI; 2001-581633/65.
P-PSDB; AAU87265.
      17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                   05-DEC-2000;
05-DEC-2000;
05-DEC-2000;
06-DEC-2000;
                                                                                                                                                  08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
                                                       17-NOV-2000;
                                                                                                            01-DEC-2000;
                                                                      17-NOV-2
                                                                                     17-NOV-2
```

The invention describes an isolated nucleic acid molecule (I) encoding a novel central nervous system protein. (I) and polypeptides (III) encoded by (I), are used to treat a medical conditions and in diagnosis of a pathological condition. Disorders which are diagnosed or treated include autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative clisorders e.g. neoplasms of the breast or liver, cardiovascular disorders e.g. cardiac arrest, carebrovascular disorders e.g. cardiac arrest, carebrovascular disorders e.g. Alzheimer's disease and amglodensis, nervous system disorders e.g. Alzheimer's disease and amglodeficiency virus (AIDS) and fungi, ocular disorders e.g. Aqquired immunodeficiency virus (AIDS) and fungi, ocular disorders e.g. diabetes e.g. corneal infection, gastrointestinal disorders e.g. dysphagia.

CC adenocarcinomas and irritable bowel syndrome, reproductive system disorders e.g. testicular feminisation, endocrine disorders e.g. diabetes and pituitary dwarfism, cancers and disorders at the cellular level e.g. leukaemia, disorders involving neovascularisation e.g. malignancies, respiratory disorders e.g. nonallergic rhinitis, renal disorders e.g. respiratory disorders e.g. nonallergic rhinitis, renal disorders e.g. cutte kidney failure and blood related disorders e.g. myocardial cinfarction. The polypeptides can also be used to aid wound healing and epithelial cell proliferation, to prevent skin aging due to sunburn, to continuary tissues, to regenerate tissues and in chemotaxis. The primary tissues, to regenerate tissues and in chemotaxis. The polypeptides can also be used as a food additive or preservative to increase or decrease storage capabilities, fat content, lipid, protein,

Gaps ö 56.5%; Score 32.2; DB 4; Length 2206; 50.9%; Pred. No. 55; ive 13; Mismatches 13; Indels 0 Local Similarity 50.9 Query Match Best Loca Matches

ö

1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG 53

> 셤 à

```
2000US-0229344P

2000US-0229345P

2000US-0229345P

2000US-023043P

2000US-023143P

2000US-023144P

2000US-0231243P

2000US-0231244P

2000US-0231244P

2000US-0231244P

2000US-0231249P

2000US-023196P

2000US-02339P

2000US-02339P

2000US-02339P

2000US-023239P

2000US-023239P

2000US-023239P

2000US-023239P

2000US-023239P

2000US-023239P

2000US-023239P

2000US-023239P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0240960P.
2000US-0241221P.
2000US-0241785P.
2000US-0241786P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0241826P.
2000US-0244617P.
2000US-0246474P.
2000US-0246475P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0241787P.
2000US-0241808P.
2000US-0241809P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0246525P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0237038P
2000US-0237039P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0249209P
23 - AUG-2000;

10 - SAUG-2000;

11 - SEP-2000;

10 - SEP-2000;

11 - SEP-2000;

10 - SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-0CT-2000;
02-0CT-2000;
02-0CT-2000;
13-0CT-2000;
13-0CT-2000;
20-0CT-2000;
20-0C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                       14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-OCT-2000;
   meuroprotective; nootropic; antiparkinsonian; anticonvulsant;
antidiabetic; antirheumatic; antiarthritic; dermatological;
antidiflammatory; immunsouppressive; antithyroid; antianemnic; vasotropic;
manti-HIV, hepatotropic; virucide; antibatcerial; fungicide;
antiparasitic; muscular; gynaecological; gastrointestinal; respiratory;
cardiovascular; antiarteriosclerotic; antiarrhythmic; cardiant;
mephrotropic; litholytic; cytostatic; gene therapy; neural disorder;
M nephrotropic; litholytic; cytostatic; gene therapy; neural disorder;
M nemotrophic lateral sclerosis; multiple sclerosis;
M myotrophic lateral sclerosis; multiple sclerosis;
M myotrophic lateral sclerosis; multiple sclerosis;
M minimamatory disorder; ischaemia-reperfusion injury;
inflammatory bowel disease; Crohn's disease; infection; disease;
M inflammatory bowel dasease; Crohn's disease; infection;
M infection; parasitic infection; bacterial infection;
fungal infection; parasitic infection; muscular disorder;
m cardiovascular disorder; gastrointestinal disorder; pulmonary disorder;
m renal disorder; acute glomerulonephritis; pyelonephritis;
m renal lithiasis; proliferative disorder; cancerous diseases; human; gene;
                                                                                                                                          cDNA encoding novel human protein seq id 185
                                    ADI53982 standard; cDNA; 2206 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-FEB-2000; 2000US-0180628P.
24-FEB-2000; 2000US-0180632P.
16-MAR-2000; 2000US-0189374P.
17-MAR-2000; 2000US-0189374P.
17-MAR-2000; 2000US-019913P.
19-MAY-2000; 2000US-020913P.
19-MAY-2000; 2000US-020913P.
19-MAY-2000; 2000US-020913P.
28-JUN-2000; 2000US-021513P.
30-JUN-2000; 2000US-021513SP.
07-JUL-2000; 2000US-021513SP.
07-JUL-2000; 2000US-021513SP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0217487P

2000US-0217486P

2000US-0218290P

2000US-022954P

2000US-0224518P

2000US-0225214P

2000US-0225214P

2000US-0225214P

2000US-022526P

2000US-022526P

2000US-022526P

2000US-022526P

2000US-022526P

2000US-022526P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0179065P.
2000US-0180628P.
2000US-0184664P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JAN-2001; 2001US-00764875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0226868P
2000US-0227182P
                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US2004018969-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JUL-2000; 2
11-JUL-2000; 2
14-JUL-2000; 2
26-JUL-2000; 2
26-JUL-2000; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-AUG-2000;
14-AUG-2000;
14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-AUG-2000;
22-AUG-2000;
22-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ното варіеля
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-AUG-2000;
                                                                                                        22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JAN-2004
                                                                       ADI53982;
RESULT 14
ADI53982/c
```

Human; primer; detection; diagnosis; antisense therapy; gene therapy; ss.

Human cDNA sequence SEQ ID NO:14719

Ното варіепв. EP1074617-A2 07-FEB-2001

```
New polypeptides and nucleic acid molecules, useful for detecting, preventing, diagnosing, prognosticating, treating or ameliorating medic conditions e.g. neural disorders, reproductive disorders or infectious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 12; Length 2206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56.5%; Score 32.2; 50.9%; Pred. No. 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 185; 413pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Barash SC;
17-NOV-2000; 2000US-0249210P.
17-NOV-2000; 2000US-0249211P.
17-NOV-2000; 2000US-0249211P.
17-NOV-2000; 2000US-0249213P.
17-NOV-2000; 2000US-0249214P.
17-NOV-2000; 2000US-0249214P.
17-NOV-2000; 2000US-0249216P.
17-NOV-2000; 2000US-0249216P.
17-NOV-2000; 2000US-0249216P.
17-NOV-2000; 2000US-024926P.
17-NOV-2000; 2000US-025198P.
05-DEC-2000; 2000US-025198P.
05-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-025186P.
                                                                                                                                                                                                                                                                                                                               08-DEC-2000; 2000US-0251990P
                                                                                                                                                                                                                                                                                                                                                                                                                                 Rosen CA, Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-122079/12.
                                                                                                                                                                                                                                                                                                                                                                                                        BARA/) BARASH S C.
                                                                                                                                                                                                                                                                                                                                                                               (ROSE/) ROSEN C A. (RUBE/) RUBEN S M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB; ADIS4580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
```

Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs.

Claim 8; SEQ ID NO 14719; 2537pp + Sequence Listing; English.

Yamamoto J;

hikawa T, Hayashi K, Saito K, Y Wakamatsu A, Nagai K, Otsuki T;

Ota T, Isogai T, Nishikawa T, Ishii S, Sugiyama T, Wakamatsu

WPI; 2001-318749/34.

99JP-00248036. 99JP-00300253. 2000JP-00118776.

29-JUL-1999; 27-AUG-1999; 11-JAN-2000;

09-JUN-2000; 2000JP-00241899

(HELI-) HELIX RES INST.

28-JUL-2000; 2000EP-00116126

```
The invention describes an isolated polypeptide comprising an amino acid sequence at least 90% identical to: a polypeptide fragment, domain, epitope, or full-length protein of any one of 607 amino acid sequences (I) described in the specification, a polypeptide fragment of (I), or the encoded sequence contained in (II), having biological activity; or a variant, allelic variant, or a species homologue of (I). The polypeptides and nucleic acid molecules are useful for detecting, preventing, diagnosing, prognosticating, treating or ameliorating medical conditions such as neural disorders, e.g. Alzahaer's disease, Parkinson's disease, Huntington's chorea, amyotrophic lateral sclerosis or multiple sclerosis,
medical
```

The present invention describes primer sets for synthesising 5602 full
[angth cDNAs defined in the specification. Where a primer set comprises:

[c [a] an oligo-dr primer and an oligonucleotide complementary to the

c complementary strand of a polymucleotide which comprises one of the 5602

[an oligonucleotide comprises at least 15 nucleotides; or (b) a combination

of an oligonucleotide comprises a sequence complementary to the

c complementary strand of a polymucleotide which comprises a 5'-end

c complementary strand of a polymucleotide which comprises a 5'-end

c complementary strand of a polymucleotide which comprises a 5'-end

c complementary strand of a polymucleotide which complementary to the

c complementary strand of a polymucleotide which complementary to the

c complementary strand of a polymucleotide which comprises a 5'-end

c polymucleotide comprises a 1'-end sequence, where the

coligonucleotide comprises at least 15 nucleotides and the combination of

the 5'-end sequence/3'-end sequence is selected from those defined in the

coligonucleotide comprises and 1'-end sequence in selected from those defined in

c specification. The primer sets can be used in antisense therapy and in

c specification and/or diagnosis of the abnormality of the proteins encoded by

c the full-length cDNAs. The primers are also useful for the

c cDNAs easily without any specialised methods. AAH03166 to AAH13628

c represent human amino acid sequences; and AAH13629 to AAH3632 represent

c oligonucleotides, all of which are used in the exemplification of the

```
Gaps
                                                                                          1458 GTGACAGCTTCCTTGAGAAGCTCCATGGGCATGGCTATGGGCATGGCTAAAGG 1406
                                      ö
                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
56.5%; Score 32.2; DB 4; Length 2258; 50.9%; Pred. No. 56; tive 13; Mismatches 13; Indels 0
                                                                                                                                                                   completed: March 15, 2005, 11:20:13
ne : 321.5 secs
                 Local Similarity 50.9
                          Best Loca
Matches
                                                                                                                                                                       Search co
```

Sequence 2258 BP; 608 A; 435 C; 473 G; 742 T; 0 U; 0 Other;

Ouerv Match

ô

Gaps

ó

13; Mismatches 13; Indels 55;

Local Similarity 50.99 tes 27; Conservative

Matches

1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG 53

AAH16046 standard; cDNA; 2258 BP.

RESULT 15 AAH16046/

유 ò

26-JUN-2001 (first entry)

AAH16046;

ö

```
LENGTH: 1927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6519, Ap
Sequence 16, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 14, Appl
Sequence 14, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 15, 2005, 10:18:52; Search time 94.5 Seconds (without alignments) 986.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 9,
Sequence 13
                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                       1 ggguccaccuccucgcggun......eggggcauggcuaagggaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                      GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-620-312D-726
US-09-380-287A-9
US-09-262-991A-6553
US-09-252-991A-65519
US-09-252-991A-6519
US-08-238-963A-11
US-08-238-963A-13
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-17
US-08-238-963A-17
US-08-238-963A-18
US-08-18-18-18
US-08-18-18-18
US-08-18-18-18
US-08-73-158-80
US-08-73-158-80
US-08-73-158-80
US-08-73-158-80
US-08-73-158-80
US-08-73-158-80
US-08-73-158-80
                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JS-08-931-869-80
                                                                                                                                                                        1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                       nucleic search, using sw model
                                                                                                                                          IDENTITY NUCDX Gapop 10.0 Gapot 1.0
                                                                                              US-09-699-667E-62
57
                                                                                                                                                                                                                  seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                              Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
83
84
84
2358
13706
14311
14311
14311
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match
                                                                                                  Title:
Perfect score:
                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                       OM nucleic
                                                                                                                                                                                                                                                                                        Database :
                                                                                                                        Sequence:
                                                                                                                                                                         Searched:
                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
```

000

```
Sequence 40, Appl
Sequence 80, Appl
Sequence 80, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 13, Appl
Patent No. 5225337
Patent No. 5225337
Sequence 25, Appl
Sequence 7575, Appl
Sequence 7575, Appl
Sequence 741, Appl
Sequence 1, Appl
Sequence 2, Appli
Sequence 1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Liu, Chenghua
APPLICANT: Liu, Chenghua
APPLICANT: Abundi, Vinod
APPLICANT: Abundi, Vinod
APPLICANT: Ren, Feiyan
APPLICANT: Ren, Feiyan
APPLICANT: Ren, Rui-hong
APPLICANT: Wehrman, Tom
APPLICANT: Wehrman, Tom
APPLICANT: Yang, Yonghong
APPLICANT: Yang, Yonghong
APPLICANT: Anny Jian-Rui
APPLICANT: Anny Jian-Rui
APPLICANT: Mang, Jian-Rui
APPLICANT: Mang, Dunrui
APPLICANT: Mang, Dunrui
APPLICANT: Mang, Zhiwei
APPLICANT: Wang, Zhiwei
APPLICANT: Wang, Runqing
APPLICANT: Wang, Runqing
APPLICANT: Mang, Runrui
APPLICANT: OF INVENTION: No. 6569662el Nucleic Acids and
TITLE OF INVENTION: No. 9549eptides
                                                                                                                      US-08-553-619B-25
US-08-553-619B-30
US-09-902-540-7575
US-09-902-540-741
US-09-554-337-1
US-09-103-840A-1
3 US-09-103-840A-1
US-09-103-840A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
                             US-09-236-140A-40
US-09-236-140A-80
US-09-554-337-2
US-09-733-042-12
US-09-733-042-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REPRENCE: 784CIP2B
CURRENT APPLICATION NUMBER: US/09/620,312D
CURRENT FILING DATE: 2000-07-19
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOFTWARE: Dt. FL. genes Version 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.5%; Score 32.2; 1 50.9%; Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Mismatches
                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                              5225337-2
5225337-2
                                                                                                                                                                                                                                                                                                                            US-09-620-312D-726/c
; Sequence 726, Application US/09620312D.
; Patent No. 6569662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 56.5
Cast Local Similarity 50.9
Matches 27; Conservative
                              52
90
90
90
101
101
101
105
105
6375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; NAME/KEY: CDS
; LOCATION: (88)..(1224)
US-09-620-312D-726
                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                               444444444444444444444444
```

Gaps

ö

Score 30.2; DB 4; Length 13818; Pred. No. 1.46+02; 9; Mismatches 13; Indels 0;

53.0%;

```
6 CACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGACC 56
; LENGTH: 13818
; TYPE: DNA
; ORGANISM: Myxococcus xanthus
US-09-902-540-1102
                                                                                                           Query Match
Best Local Similarity 56.99
Matches 29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3

US-09-902-540-1102/c
; Sequence 1102, Application US/09902540
; Patent No. 6833447
; GENERAL INFORMATION:
; APPLICANT: Goldman, Barry S.
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Wiegand, Roger C.
; TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof
;; TITLE OF INVENTION: Wyxococcus xanthus Genome Sequences and Uses Thereof
;; TITLE OF INVENTION: Wyxococcus xanthus Genome Sequences and Uses Thereof
;; TITLE OF INVENTION: Wyxococcus xanthus Genome Sequences
;; TITLE OF INVENTION: WywBER: 60/217,883
;; PRIOR APPLICATION WYWBER: 60/217,883
; NUMBER OF SEQ ID NOS: 16825
; SEQ ID NO 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                             Sequence 9, Application US/09380287A
Patent No. 6710171
GENERAL INFORMATION:
APPLICANT: NAKAWURA, TUSHIHIRO
APPLICANT: TSUKADA, SHUICHI
TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE PROTEIN ORIGINATING IN MAMMALS
PILE REPERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (1540)...(1542), (1582)..(1584), (1693)..(1695)
OTHER INFORMATION: Xaa is Phe or Ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4;
                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/380,287A
CURRENT FILING DATE: 1999-11-16
PRIOR APPLICATION NUMBER: JP 1997-62259
PRIOR FILING DATE: 1997-02-28
PRIOR FILING DATE: 1998-02-25
NUMBER OF SEQ ID NOS: 42
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (1015)...(1017)
OTHER INFORMATION: Xaa is Lys or Arg
NAME/KEY: misc feature
LOCATION: (1495)...(1494)
OTHER INFORMATION: n is a or g or c or t
OTHER INFORMATION: Xaa is Gln or Lys or Glu
NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 56.5%; Score 32.2; 18est Local Similarity 50.9%; Pred. No. 19; Matches 27; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(1785)
NAME/KEY: misc feature
LOCATION: (289)..(291)
OTHER INFORMATION: Xaa is Phe or Leu
NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: n is a or g or c or US-09-380-287A-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature
LOCATION: (1609)..(1611)
OTHER INFORMATION: Xaa is Gln or Arg
NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
                                                 US-09-380-287A-9/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
Parent No. 65513 Application US/09252991A

Parent No. 6551795

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: ARRUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
TITLE OF INVENTION: ARRUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
TITLE OF INVENTION NUMBER: US/09/252,991A
CURRENT APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR PILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 6553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: ABRUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERENCE: 107196,136
CURRENT APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1999-02-18
PRIOR FILING DATE: 1999-02-18
PRIOR FILING DATE: 1999-07-27
NUMBER: OS 60/094,190
RIOR FILING DATE: 1998-07-27
NUMBER: OS 60/094,190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 52.6%; Score 30; DB 4; Length 2469; Best Local Similarity 50.0%; Pred. No. 94; Matches 23; Conservative 13; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.6%; Score 30; DB 4; Length 1740; 50.0%; Pred. No. 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 52.6%; Score 30; DB 4
Best Local Similarity 50.0%; Pred. No. 84;
Matches 23; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6519, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
US-09-252-991A-6519/c
                                                                                                              RESULT 4
US-09-252-991A-6553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-252-991A-6553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-252-991A-6519
```

```
FCT-US96-06053-12
Sequence 12, Application PC/TUS9606053
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: RECOMBINANT VESICULOVIRUSES AND THEIR
TITLE OF INVENTION: USES
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & BDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: USA
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC COMPUTER
COMPUTER: IBM PC COMPUTER
COMPUTER: PC COMPUTER
COMPUTER
COMPUTER: PC COMPUTER

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3; Length 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCGAAGGAGGACGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                        COMPUTER: PLOPPY disk
COMPUTER: FLOPPY disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/646,695
FILING DATE: On Even Date Herewith
CLASSIFICATION: 435
ATTONENT/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,802
REFERENCE/DOCKET NUMBER: 6523-008
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHOME: (212) 790-9090
TELEFRAX: (212) 780-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
PAPLICATION NUMBER: PCT/US96/06053 FILING DATE: 01-MAY-1996 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51.9%; Score 29.6; I
52.3%; Pred. No. 44;
:ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 6523-(
TELECOMMUNICATION INFORMATION:
TELEFAX: (212) 790-9090
TELEX. 66141 PENNIE
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 83 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (212) 869-9741/881
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERICTICS:
LENGTH: 83 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 52.3
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                 ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: DNA
US-08-646-695-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12, Application US/08646695
Fatent No. 6168943
GENERAL INPORMATION:
FATILE OF INVENTION: RECOMBINANT VESICULOVIRUSES AND THEIR
TITLE OF INVENTION: USES
TITLE OF INVENTION: USES
NUMBER OF SEQUENCES:
ADDRESSEE: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
256 GCTGCAACTCTTCGCTGAGCGCCTTGGGCAAGGCTTCGGGATTGGC 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-US-LOS-JOAN-16
Sequence 16, Application US/08238963A
Patent No. 5625047
GENERAL INFORMATION:
APPLICANT: Rosenstein, Sarah P.
APPLICANT: Rosenstein, Sarah P.
APPLICANT: Perrotta, Anne T.
TITLE OF INVENTION: ENZYMATIC RNA MOLECULES
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSE: Lyon & Lyon
STREET: Suite 4700
CITY: Los Angeles
STREET: Suite 4700
CITY: Los Angeles
STREET: Suite 4700
CITY: Los Angeles
STREET: Suite 6700
CONVITER: RADABLE FORM:
MEDIUM TYPE: Storage
COMPUTER: RADABLE FORM:
MEDIUM TYPE: Storage
COMPUTER: More Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/238,963A
FILING DATE: Manuary 13, 1992
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 207/093
TELECOMONINCATION INFORMATION:
REGISTRATION NUMBER: 207/093
TELECOMONINCATION INFORMATION:
TELECOMONINCATION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 29.6;
Pred. No. 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 65.9
Matches 29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , TOPOLOGY: linear
US-08-238-963A-16
                                                                                                                                                      US-08-238-963A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
US-08-646-695-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
셤
```

```
APPLICANT: Been, Michael D.
APPLICANT: Rosenstein, Sarah P.
APPLICANT: Perrotta, Anne T.
ITHER OF INVENTION: ENZYMATIC RNA MOLECULES
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/238,963A
FILING DATE: May 5, 1994
CLASSIFICATION DATA:
APPLICATION NUMBER: 07/821,155
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/821,155
FILING DATE: January 13, 1992
ATTORNEY, AGENT INFORMATION:
NAME: WAFDLIG, RICHARD OF SECTION OF
                                                                                                                                                                                                                                                                                                    ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIF: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: Storage
                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                            51.9%; Score 29.6; DB 5; Length 83; 52.3%; Pred. No. 44; tive 12; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCGAAGGACGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UCCACCUCCUCGCGGUCCGACCUGGGCAUCCGAAGGAGGACGUC 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51.9%; Score 29.6; DB 1; 65.9%; Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 13, Application US/08238963A
Fatent No. 5625047
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Resenstein, Sarah P.
APPLICANT: Perrotta, Anne T.
ITLE OF INVENTION: ENZYMATIC RNA MOLECULES
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 44;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Los Angeles
STREET: California
COUNTRY: U.S.A.
ZIP: 90071-206
COMPUTER: California
COUNTRY: U.S.A.
ZIP: 90071-206
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.0° DOS 5.0
SOFTWARE: Nord Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/238,963A
FILING DATE: May 5, 1994
CLASSIFICATION DATA:
APPLICATION NUMBER: 07/821,155
FILING DATE: January 13, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRANCE/DOCKET NUMBER: 207/093
TELEFRANCE/DOCKET NUMBER: 207/093
TELEFRANCE/OCKET NUMBER: 207/093
TELEFRANCE/OCKET NUMBER: 207/093
TELEFRANCE/DOCKET NUMBER: 207/093
TELEFRANCE/OCKET NUMBER: 207/093
TELEFRANCE/DOCKET NUMBER: 207/093
                                                                                                                                                                                                                                          Best Local Similarity 52.3
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-238-963A-13
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                     PCT-US96-06053-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
US-08-238-963A-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
```

```
Gaps
                                                                                                                       ö
                                                                               51.9%; Score 29.6; DB 1; Length 84;
65.9%; Pred. No. 44;
.ive 6; Mismatches 9; Indels
                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Been, Michael D.
APPLICANT: ROSenstein, Sarah P.
APPLICANT: Perrotta, Anne T.
TITLE OF INVENTION: ENZYMATIC RNA MOLECULES
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSE: Lyon & Lyon
STREET: 613 West Fifth Street
STREET: Los Angeles
STREET: California
COUNTRY: U.S.A.
The letter "N" stands for any base.
                                                                                                                                                                                                                                                                                                      Sequence 6, Application US/08238963A Patent No. 5625047
                                                                                 Query Match
Best Local Similarity 65.9
Matches 29; Conservative
) OTHER INFORMATION:
) OTHER INFORMATION:
US-08-238-963A-14
                                                                                                                                                                                                                                                               RESULT 11
US-08-238-963A-6
```

RESULT 10 US-08-238-963A-14 ; Sequence 14, Application US/08238963A

```
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Seeven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof
FILE REPERBENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: 2001-07-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GUCCACCUCCUCGCGGUNNNNNNGGGCAUGCCUUCGGGCAUGGCUAAGGGA 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 51.9%; Pred. No. 2.1e+02;
Matches 27; Conservative 11; Mismatches 14; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Rose, John K.
TITLE OF INVENTION: RECOMBINANT VESICULOVIRUSES AND THEIR TITLE OF INVENTION: USES
NUMBER OF SEQUENCES: 44
CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDWONDS
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

COMPUTER READABLE FORM:
MEDIUM TYPE: Rloppy disk
COMPUTER: Ploppy disk
COMPUTER: Plop Compatible
OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/646,695
FILING DATE: On Even Date Herewith
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/POCKET VUMBER: 6523-008
TELEPPAX: (212) 790-9090
TELEPPAX: (212) 869-9741/8864
                                                                                                                                                                                                                                  PRIOR APPLICATION DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 1124
LENGTH: 13706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/08646695
Patent No. 6168943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 14311 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Myxococcus xanthus
US-09-902-540-1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: New York
STATE: New York
                                                                      APPLICANT: Goldman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JS-08-646-695-1
                                                                                                                                                                                                                                                                                                                                                                                                          . TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2667, Application US/09902540
; Sequence 2667, Application US/09902540
; Patent No. 683347
; GENERAL INFORMATION:
; APPLICANT: Goldman, Barry S.
; APPLICANT: Slater, Steven C.
; APPLICANT: Slater, Steven C.
; TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof
; FILE REFERENCE: 38-10(15849)B
; CURRENT APPLICATION NUMBER: US/09/902,540
; CURRENT PILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: 60/217,883
; RUMBER OF SEQ ID NOS: 16825
; SEQ ID NO 2667
; LENGTH: 2358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1048 Gréceécaerréacegacergracégegacérrégadegécéraceda 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GUCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGCUAAGGGA 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 51.9%; Score 29.6; DB 4; Length 2358; Best Local Similarity 51.9%; Pred. No. 1.2e+02; Matches 27; Conservative 11; Mismatches 14; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20 UCCACCUCCUCGCGGUCCGACCUGGGCAUCCGAAGGAGGACGUC 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 51.9%; Score 29.6; D
Best Local Similarity 65.9%; Pred. No. 45;
Matches 29; Conservative 6; Mismatches
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 8tcrage
COMPUTER: 1BM Compatible
COMPUTER: 1BM Compatible
COMPUTER: 1BM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/238,963A
FILING DATE: May 5, 1994
CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION: 435
APPLICATION NUMBER: 07/821,155
FILING DATE: January 13, 1992
ATTORNEY/ACENT INFORMATION:
REFERENCE/DOCKET NUMBER: 207/093
TELEFRAN: (213) 955-0440
TELEFRAX: (213) 955-0440
TELEFRAX: (213) 955-0440
TELEFX: 67-3510
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 86 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: ACCENT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , Sequence 1124, Application US/09902540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Myxococcus xanthus US-09-902-540-2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
US-09-902-540-1124/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-238-963A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
```

원

ઠ

Gapa

Job time : 98.5 secs

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
US-08-646-695-7/c
| Sequence 7, Application US/08646695
| Patent No. 61689410|
| GENERAL INFORMATION:
| APPLICANT: Rose, John K,
| TITLE OF INVENTION: RECOMBINANT VESICULOVIRUSES AND THEIR
| TITLE OF INVENTION: USES
| NUMBER OF SEQUENCES: 44
| CORRESPONDENCE ADDRESS:
| ADDRESSE PENNIE & EDMONDS |
| STREET: 1155 Avenue of the Americas |
| CITY: New York |
                                                                                                                                                                                                                                                                                                                                                  Query Match 51.9%; Score 29.6; DB 3; Length 14311; Best Local Similarity 52.3%; Pred. No. 2.1e+02; Matches 23; Conservative 12; Mismatches 9; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 51.9%; Score 29.6; DB 3; Length 14311; Best Local Similarity 52.3%; Pred. No. 2.1e+02; Matches 23; Conservative 12; Mismatches 9; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2438 TCCACCTCCTCGCGGTCCGACCTGGGCATCCGAAGGAGGACGTC 2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCCUUCGGGCAUGGC 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: New York
COUNTRY: New York
COUNTRY: USA
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/646,695
FILING DATE: On Even Date Herewith
CLASSIFICATION: 435
ATTONEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/POCKET NUMBER: 6523-008
TELEFRAM: (212) 790-9090
TELEFRAM: (211) 790-9090
TELEFRAM: (212) 790-9090
TELEFRAM: (211) 790-9090
TELEFRAM: (212) 700-9090
                                                                                                                                                                                                                                     CDS
5429..11755
                                                                                                                                              CDS
3774..5306
                                                            CDS
2946..3632
   2092..2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
3: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY: 11.
; MOLECULE TYPE:
US-08-646-695-7
LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                               FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                  ; NAME/KEY:
; LOCATION:
US-08-646-695-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

Search completed: March 15, 2005, 15:26:37

۶

us-09-699-667e-63.siz.rng

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

	March 15, 2005, 11:20:37 ; Search time 205.285 Seconds
	205.28
	time
	Search
- nucleic search, using sw model	••
ē.	:37
3	. 20
ing	11
gn	05.
ch,	20
ear	15.
ω U	ch
lei	Mar
unc	
ï	
OM nucleic	
ucl	Run on:
Σ	gn
ō	Ŕ

(without alignments) 1066.957 Million cell updates/sec US-09-699-667E-63 Title: Perfect score: Sequence:

1 ggguccaccuccucgcggunnnnnugggcaugcgcc 37 IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Scoring table:

4316768 Total number of hits satisfying chosen parameters: 4390206 segs, 2959870667 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 60

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

N. Geneseq 16Dec04:\*
1: geneseqn1990s:\*
2: geneseqn200s:\*
3: geneseqn2001s:\*
5: geneseqn2001ss:\*
6: geneseqn2001bs:\*
6: geneseqn2001bs:\*
7: geneseqn2003bs:\*
8: geneseqn2003bs:\*
10: geneseqn2003ds:\*
11: geneseqn2003ds:\*
11: geneseqn2003ds:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Aaz57639 Nucleotid	Aaz57636 Trans-act		Aaz57638 Trans-act	Adr47040 Dengue vi	Adt48965 PCR prime	Aag86173 Primer HD	Aaq86204 Sindbis/H	Aat31151 HDV rever	Aat30817 HDV riboz	Aav42394 Nested PC	Aav42426 Forward P	Aav60154 Nested PC	Aav60185 Reverse P	Aav70746 Reverse P	Aav70714 Nested pr	Aaz92930 Hepatitis	Aaz92970 Hepatitis	Aaz92843 Hepatitis	Aaz92803 Hepatitis
SUMMARIES	ID	AAZ57639	AAZ57636	AAZ57637	AA257638	ADR47040	ADT48965	AAQ86173	AAQ86204	AAT31151	AAT30817	AAV42394	AAV42426	AAV60154	AAV60185	AAV70746	AAV70714	AAZ92930	AAZ92970	AAZ92843	AAZ92803
	DB	<u>س</u>	ო	ю	٣	13	13	7	8	8	ď	7	0	N	~	8	~	e	٣	e	m
	Length	37	57	57	57	48	48	51	52	52	52	52	52	52	52	52	52	52	52	52	52
	* Query Match	100.0	95.7	95.7	91.9	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
	Score	37	35.4	35.4	34	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
			7	е	4	'n	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20

Aal38850 Alphaviru	Aal38810 Alphaviru	Abk46276 HDV antig	Abk46316 Hepatitis	Adi30383 Hepatitis	Adi30423 Hepatitis	Adol3982 Eukaryoti	Adol3942 Eukaryoti	Adh10551 Hepatitis	Aax59264 Nested pr	Aax58506 Nested pr		Ada50686 Sindbis v	Aax78132 Hepatitis	Aaq46668 Substrate	Adp69915 Lacznle12		Aat38753 Primer us	Aaf28149 Primer #3	Aag73470 Porcine i	Aag58518 Seguence	Abn45577 Human spl	Adp75787 Mycobacte	Adi92828 Mutant Tt	Adi92829 Mutant Tt
AAL38850	AAL38810	ABK46276	ABK46316	2 ADI30383	2 ADI30423	12 ADO13982	2 ADO13942	12 ADH10551		AAX58506	ABX81463	ADA50686	AAX78132	AAQ46668	2 ADP69915	AAA35618	AAT38753	AAF28149	AAQ73470	AAQ58518	ABN45577	2 ADP75787	AD192828	ADI92829
52 6	52 6	52 6	52 6	52 13	~	2	7	7	56 2	9	9	9	45 2	N	57 1	9	58 2	8		39 2	9 09	54 1	33 7	33 7
30.4 82.2	30.4 82.2	30.4 82.2	30.4 82.2	30.4 82.2	30.4 82.2	30.4 82.2	30.4 82.2		29 78.4	29 78.4	0	29 78.4	80	24 64.9	23.4 63.2		23 62.2	23 62.2	22.4 60.5	22.4 60.5	22.4 60.5	22.2 60.0	22 59.5	22 59.5
21	22	23			26	27	8	29	30	31	32	33	34	35	c 36	c 37	G 38	c 39	40	41	c 42	c 43	C 44	45

## ALIGNMENTS

```
98CA-02230203
(UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57637
셤
                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                    ö
                                                                                                          This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to anuclatic acid enzyme (e.g. delteRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the substrate (cleavage site of the binding portion of the caryme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= e
/oote= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= c
/bound_moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                    Gaps
                                                     New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.1; ss.
                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 37; DB 3; Length 37; Best Local Similarity 83.8%; Pred. No. 0.045; Matches 31; Conservative 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                       Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCGCGGUCCGACCUGGGCAUGCGCC 37
           Ananvoranich S, Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                         Example 5; Fig 4; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57636 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30. .45
/*tag= c
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 19
                               WPI; 2000-096791/08
            Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57636;
                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
AAZ57636
 원
                                                                                                                                                                                                                                                                                                                                                                                                                       8
```

```
ö
                                                                                                                                                                                                                                                                                 This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN 5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleaved site of the substrate (cleavage site to 6 nucleotides 3' to the least one nucleotide is present 5' to the cleavage site of the substrate (cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme is used to cleave viral RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52. .57
/*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7. .19
/*tag= b
/*tag= c
/*tag= c
/bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gape
                                                                                                                              useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trans-acting antigenomic delta ribozyme; viral RNA cleavage;
inherited disease; deltaRzPl.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 95.7%; Score 35.4; DB 3; Length 57; Best Local Similarity 81.1%; Pred. No. 0.18; Matches 30; Conservative 6; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGUCCACCUCGCGGGUCCGACCUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
Lafontaine D;
                                                                                                                              New construction of nucleic acid enzyme diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                 Example 1; Fig 1A; 52pp; English.
   Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57637 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *tag=
                                                                WPI; 2000-096791/08.
```

```
This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate SPL.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzPL.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GÜNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ss; cytostatic; virucide; dengue virus; recombinant replicon; deletion; preM protein; C protein; NS1 protein signal; vaccine; cervical cancer; viral disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               enzymes also have other therapeutic, biotechnological and diagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                            New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 34; DB 3; Length 57;
Pred. No. 0.57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                         Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SHAN-): SHANGHAI TENGEN BIOMEDICAL CO LTD. (TENG-) TENGEN BIOMEDICAL CO. (BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                                                             Example 1; Fig 2; 52pp; English
                                                                                                                                                         Ananvoranich S,
                                                                98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match

Best Local Similarity 82.4%;
Matches 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-JAN-2004; 2004WO-CN000088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JAN-2003; 2003CN-00115272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADR47040 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                          UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                  WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004072274-A1.
                                                                                                                                                         Perreault J,
                                                                29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-AUG-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADR47040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADR47040
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     therapeutic, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the deltaRzP1.1 sequence (AAZ57636) shown in figure 1
                                                                                                                                                                                                                                                                             cleaves substrate SP1.2 (see AA25/634). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.2) that is constructed to have a substrate binding portion with the following sequence 3. UNNXINN.5'. The substrate of the enzyme has the sequence 5'.H*6NNXINN.3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by 4'. At least one nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site of the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The nucleotide sequence as used in substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                            This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20. .25
/*tag= c
/bound moiety= "SP1.1 substrate bases (AAZ57641) 5-11"
/*tag= d
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .6
/*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                  New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antigenomic delta ribozyme; viral RNA cleavage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95.7%; Score 35.4; DB 3; Length 57; 81.1%; Pred. No. 0.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCGCGGUCCCAGCUGGGCAUGCGGC 37
                                                              Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                       Example 1; Page; 52pp; English
                                                              Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ57638 standard; RNA; 57 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 81.1
Matches 30; Conservative
                  (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-acting antigenom
inherited disease; ss.
                                                                                                        WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
```

RESULT

ઠ 셤 ö

Gaps

. 0

Indels

0

DEV C.

```
dengue virus recombinant replicon has a deletion of the complete coding sequence for prew protein of dengue virus and also includes elements of e.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of the front 20 amino acids in the C protein, and the coding region of all protein signal; coding regions of all non-structural proteins. The cohtained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can cefficiently express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a genecypressing system using of the full-length dengue virus conv. C PRS/FLD2). The recombinant virus vectors were transfected into baby has the sequence corresponds to an oligonucleotide used in the lines. This sequence corresponds to an oligonucleotide used in the
                                                                                      Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors like cervical cancer and viral diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virucide; Japanese encephalitis B virus; bivalent vaccine; hepatitis B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82.2%; Score 30.4; DB 13; Length 48; 59.4%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TENGEN BIOMEDICAL CO.
BEIJING ORIENTAL TENGEN TECHNOLOGY DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LID
                                                                                                                                                                                                                                                Example 4; SEQ ID NO 37; 38pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCR primer 5' HDVr, seq id 29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-MAR-2003; 2003CN-00115912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADT48965 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-699719/68.
                          WPI; 2004-625870/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004082712-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-SEP-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADT48965;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BEIJ-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADT48965

ID ADT48965

XX ADT4

XX ADT4
ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

Indels

ပ်

```
The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its self-replication function. The virus is useful in producing the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the recombinant virus and have high immunoefficiency, in which the vecombinant virus and immunogenicity of attenuated encephalitis B virus watchnes. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The simplified DNA sequences were used in the construction of a eukaryotic layered vector initiation system (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                               DB 13; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Driver DA,
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                          Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chang SM, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                               17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                               82.2%; Score 30.4; I
59.4%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
                  Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 2; Page 68; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93US-00122791.
94US-00198450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-US010469.
                                                                                                                                                                                                                                                    example from the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 59.4'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI, 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ86173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAQ86173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
```

ö

8888888

요

4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35

```
RESULT 10
                                                               RESULT 9
                                                                            AAT31151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ....
                                                                                                                유
   ઠ
                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequences given in AAQ86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are eukaryotic layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevent transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-WAR-2003 to correct PN field.)
junction region prevents transcription of the subgenomic fragment making vectors such as this sultable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                               Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR;
                                                                                                                                                                                                                                                                                                                                                          transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polo
                                                                                                                ó
                                                                                     82.2%; Score 30.4; DB 2; Length 51; 59.4%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jolly DJ, Driver DA,
                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                      Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                              Seguence 51 BP; 9 A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                ;
                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chang SM,
                                                                                                                                                                                                                                BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-00122791
94US-00198450
                                                                                                                                                                                                                               AAQ86204 standard; DNA; 52
                                                                                                                                                                                                                                                                                 (revised)
(first entry)
                                                                                                 Local Similarity 59.4 es 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ĭ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                 25-MAR-2003
23-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                        AAQ86204;
                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky
                                                                                                                Matches
```

```
Primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 833-887. It was used with reverse primer HDV49-XC (AAT30850) for the PCR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SIN276-SPE (AAT31153), is used to amplify a fragment contg. Sindbis 5'-end sequences fused to HDV sequences. Overlapping synthesis is used and second round of PCR using primers HDV49-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction region, designated pd5'SES. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chang SMW, Jolly DJ, Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              Alphavirus; Sindbis virus; vector; gene therapy; vaccine; polymerase chain reaction; PCR; primer; hepatitis delta virus; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    y Match 82.2%; Score 30.4; DB 2; Length 52; Local Similarity 59.4%; Pred. No. 11; nee 19; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 7; Page 120; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dubensky TW, Polo JM, Ibanez CE,
Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94US-00348472
                                                                                                                                                                                                                                                                                                                                                                    HDV reverse primer HDV17-68
                                                                                                                                                                              AAT31151 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT30817 standard; DNA; 52
                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ribozyme; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9617072-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                      12-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                         AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAT30817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT30817
```

ö

ö

Gaps

ö

Query Match 82.2%; Score 30.4; DB 2; Length 52; Best Local Similarity 59.4%; Pred. No. 11; Matches 19; Conservative 12; Mismatches 1; Indele

for producing

Polo JM;

```
pCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA alpha: virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                        Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 82.2%; Score 30.4; DB 2; Length 52; Local Similarity 59.4%; Pred. No. 11; loservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Driver DA,
                                                                                                                                                                                                            DNA alpha:virus structural protein expression cassettes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                        Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                             recombinant alpha: virus particles.
                                                                                                                                        Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jolly DJ,
                                                                                                                                                                                                                                                             Example 3; Col 69; 140pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
              94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      вР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-00741881.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        stimulate an immune response
93US-00122791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Forward PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV42426 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                        Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ibanez CE,
                                                                                                     (CHIR ) CHIRON CORP.
                                                                                                                                                                            WPI; 1998-446089/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-446089/38
              18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US5789245-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-MAR-1995;
                                                                    15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-NOV-1994
 5-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chang SMW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV42426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV42426
   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Primer SHDVIF (AAT30816) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDV17-68 (AAT30817) and reverse primer SHDV84R (AAT30818) to generate an HDV Tibozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                         Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                    Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer; polymerase chain reaction; PCR; ELVIS; ribozyme; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 52;
                                                                                                                                                                                                                                                                                                                                                                                     Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                       Chang SMW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nested PCR primer HDV17-68 of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Pred. No. 11; 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82.2%; Score 30.4; 59.4%; Pred. No. 11
                                                                                                                                                                                                                                                                                                                                                                                       Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 3; Page 85; 256pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В.
                                                                                                                                                                                                                                                                                                  95US-00376184.
95US-00405827.
                                    HDV ribozyme primer HDV17-68
                                                                                                                                                                                                                                                 95WO-US015490
                                                                                                                                                                                                                                                                                 94US-00348472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-00741881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 59.44,
Conservative
                                                                                                                                                                                                                                                                                                                                                 CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22
   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-OCT-1998 (first entry)
                                                                                                       hepatitis delta virus; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV42394 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                         Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                     Dubensky TW,
Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-OCT-1996;
                                                                                                                                                                            WO9617072-A2
                                                                                                                                                                                                                                                 30-NOV-1995;
                                                                                                                                                                                                                                                                                 30-NOV-1994;
                                                                                                                                                                                                                                                                                                                    15-MAR-1995;
   12-SEP-1996
                                                                                                                                                                                                            06-JUN-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US5789245-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-AUG-1998
                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV42394;
```

RESULT 11 AAV42394

ò 셤 ö

Gaps

. 0

Polo JM;

Gaps

ö

Indels

#X&XCCCCCCCCX&

8 셤

```
system, based on Sinddis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5. of viral cDNA which initiates, in a susceptible target cell, 5 to 3' synthesis of RNA from the viral cDNA. The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an infection in vivo, especially where the immune response to an encidence, HIA class I-restricted or an HIA class is a cell mediated, HIA class I-restricted or an HIA class is a cell immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryotic layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCR primers AAV60184-85 are used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral CDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral CDNA.
The specifiaction describes an eukaryotic layered vector initiation
                                                                                                                                                                                                                                                                                    DB 2; Length
                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dubensky TW;
                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                            Match B2.2%; Score 30.4; I Local Similarity 59.4%; Pred. No. 11; es 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 5, Col 108; 144pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93US-00122791.
94US-00198450.
94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reverse PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV60185 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sindbis; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DUBENSKY T W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRIVER D A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POLO J M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mmine response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-0CT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV60185;
                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POLO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (JOLL/)
(DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Driver
                                                                                                                                                                                                                                                                                                          Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV60185
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                    PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression casette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotic layered vector initiation system; stimulate; immune response; Sindbis; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                            DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                      Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dubensky TW
                                                                                                                                                                                                                                                                                                                          82.2%; Score 30.4; I
59.4%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            Example 3; Col 71-72; 144pp; English.
                                    7; Col 103; 140pp; English.
recombinant alpha: virus particles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93US-00122791.
94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV60154 standard; DNA; 52 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 59.4<sup>3</sup>
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DUBENSKY T W. JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-FEB-1994;
14-SEP-1994;
30-NOV-1994;
18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2003
04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US5814482-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV60154;
                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POLO/)
(DUBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (JOLL/)
(DRIV/)
```

RESULT 13
AAV60154
AXC AAV60
XX AAV60
DT 25-MA
SINGB
XX SYNTH
DS 19-DS
DS 1

RNA comprises a vector construct which autonomously amplifies in the

```
cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I-restricted or an HLA class II-restricted immune response. (Updated on 25-MAR-2003 to correct Pk field.)
                                                                                                                                                                    Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                        82.2%; Score 30.4; DB 2;
59.4%; Pred. No. 11;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                              1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                  19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHIR ) CHIRON CORP.
                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-SEP-1993;
18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAR-2003
02-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US5843723-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chang SMW,
Polo JM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV70746;
                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                         AAV70746
8888888888
                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                          엄
```

```
PCR primers AAV70745-46 are used to amplify part of the hepatitis delta virus (HDV) genome. The amplified product is used in the production of the alphavirus vector constructs of the invention. These constructs comprise a promoter 5' of viral cDNA which initiates the synthesis of RNA from the viral cDNA by in vitro transcription, followed by a 5' sequence which initiates transcription of alphavirus RNA, followed by a nucleotide sequence encoding alphavirus nonstructural proteins, a viral junction region which has been inactivated such that viral transcription of a subgenomic fragment is prevented, an internal ribosome entry site or a sequence which promotes ribosome read through between adjacent reading frames, and an alphavirus RNA polymerase recognition sequence. The recombinant alphavirus vectors can be used for gene therapy. (Updated on 20-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alphavirus vectors constructs containing a 5' promoter of viral cDNA by in vitro transcription - used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Driver DA
                                                                                                              Reverse PCR primer HDV17-68 used to amplify Hepatitis delta virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Belli BA, Ibanez CE,
                                                                                                                                                  Alphavirus vector construct; gene therapy; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jolly DJ, Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 7; Col 103; 140pp; English.
                                                                                                                                                                                                                                                                                                                               93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
 BP
                                                                                                                                                                                                                                                                                                   96US-00739167
AAV70746 standard; DNA; 52
                                                                 (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-044581/04.
```

```
Gaps
                                                          ö
                                  DB 2; Length 52;
                                                          Indels
         Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                          1;
                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                     ch 82.2%; Score 30.4; I Similarity 59.4%; Pred. No. 11; 19; Conservative 12; Mismatches
                                    Query Match
Best Local Similarity
                                                             Matches
χg
                                                                                       à
                                                                                                             셤
```

ö

Search completed: March 15, 2005, 16:13:02 Job time : 206.285 secs

ö

Gaps

ö

1; Indels

Length 52;

Scoring table:

Searched:

Minimum DB Maximum DB

Database

Perfect score:

Sequence:

OM nucleic

Run on:

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 955856-A 53 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                             AR353208 Sequence
BD078782 Recombine
BD085609 Recombina
                      Sequence
                                                                    Sequence 19
                                                                                                       Sequence
Sequence
                                                                                                                      Sequence
Sequence
Sequence
                                                                                                                                                                                         Enzymatic
                                                                                 Sequence
Sequence
        Sequence
                 Seguence
                                      Sequence
                                                                          Sequence
                                                                                                  Sequence
                                                                                                                                            Sequence
                                                                                                                                                     Sequence
                                                                                                                                                            Sequence
                                                                                                                                                                    Sequence
                                                                                                                                                                           Sequence
                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
AR368219 CQ759677 AR221187 AR234088 AR237698 AR353208 BD078782
                                                                  141391 Sec. AR123049 AR123049 AR123049 AR123049 AR310379 AR310379 AR350191 AR3509158 AR165900 AR165900 AR306753 AR306753 AR306753 AR306753 BD0669035 BD069035
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                      6; Length 37
                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGUCCACCUCCCCCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                  1..37
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 95.7%; Score 35.4; DB Best Local Similarity 64.9%; Pred. No. 3.5; Matches 24; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 44 from Patent W09955856.
AX012282
AX012282.1 GI:9998343
                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                  37 bp
Sequence 53 from Patent WO9955856
                                    AR237698
AR353208
BD078782
BD085609
                                                                         AR123049
AR125066
CQ548690
AX317378
AX317379
AR3502161
AR039158
AR128882
                      AR230614
AR234088
                                                                                                                                                                                                                                                                   AX012291
AX012291.1 GI:9998352
                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct
synthetic construct
 DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
AX012282
LOCUS
                                                                                                                                                                                                                                            AX012291
LOCUS
                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                      RESULT 1
 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                   March 15, 2005, 12:35:18 ; Search time 729.614 Seconds (without alignments) 2457.248 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                              AX012291 Sequence
AX012282 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seguence
                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR043462
AR062337
AR062377
AR183796
AR183836
AR368179
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012288
AX012289
AX012290
AX012284
AR021007
AR021047
AR043422
                                                                                                                                                     1981570
       GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                 1 ggguccaccuccucgcggunnnnnugggcaugcgcc
                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                    4708233 segs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                      - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                             AX012283

AX012285

AX012287

AX012287

AX012288

AX012288

AX012289

AX012289

AX012289

AX012289

AX012393

AX012393777

AR0623377

AR0623377

AR183396

AX1883396
                                                                                                               IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                             US-09-699-667E-63
                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                           90 ba: *
90 ba: *
90 ba: *
90 ba: *
90 bat: *
90 bat: *
90 bat: *
90 bat: *
                                                                                                                                                                                                                                                                                                                                                                                         Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                       GenEmbl:*
                                                                                                                                                                   seq length: 0
seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                              13::::
```

ö

Result Š

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-NOV-1999;

PANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 955856-A 48 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROCKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                        Gaps
                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                 95.7%; Score 35.4; DB 6; Length 57; 64.9%; Pred. No. 3.3; ive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 64.9%; Pred. No. 3.3; Matches 24; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                 1 GGGTCCACCTCCTCGCGGTCGCCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGTCCACCTCCTCGCGGTCCGGCCTGGGCATGCGGC 37
                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                 1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:3269"
/noFe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/bb_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                        Sequence 48 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 49 from Patent WO9955856.
AX012287
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                     AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                     Local Similarity 64.9%
nes 24; Conservative
                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                       source
                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                            RESULT 5
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                ઢ
                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 45 04-NOV-1999;
ANANVORANICH SITHMART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Barant: WO 9955856-A 47 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                     Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 995586-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                     95.7%; Score 35.4; DB 6; Length 57; 64.9%; Pred. No. 3.3; ive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 64.9%; Pred. No. 3.3; Matches 24; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                     1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGCATGCGGC 37
                                                                                                                                                 1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
other sequences; artificial sequences.
 other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX012285
Sequence 47 from Patent W09955856.
AX012285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX012283 57 bp
Sequence 45 from Patent WO9955856.
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                                                            24; Conservative
                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
AX012283
                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
```

VERSION

ORIGIN

ð 셤 ORIGIN

ઠે 셤 SOURCE

ö

g

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 995856-A 52 04-00V-1999;
PANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
1. 57

/organism="synthetic construct"
//mol_type="unassigned RNA"
//db_xref="tassasigned RNA"
//db_xref="tassasigned RNA"
//note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 05-DEC-1998
                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 46 04-NOV-1999;
ANANVORANICH SIRINARA (1) LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91.9%; Score 34; DB 6; Length 57; 64.7%; Pred. No. 10; tive 12; Mismatches 0; Indels
                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
1 GGGTCCACCTCCTCGCGGTCCGAGCTGGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGTCCACCTCCTCGCGGTCCGATCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.57
/organism="synthetic construct"
/mol type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                    RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 95.7%; Score 35.4; DB 1 Similarity 64.9%; Pred. No. 3.3; 24; Conservative 12; Mismatches
                                                                                                                                                                                                        other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR021007
Sequence 40 from patent US 5789245.
                                                                                            رّ بيّ كاريك Sequence 52 from Patent W09955856.
AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012284 57 bp Sequence 46 from Patent W09955856.
                                                                                    22
                                                                                                                                      AX012290.1 GI:9998351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012284.1 GI:9998345
                                                                                                                                                                      synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 22; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 24; Conserv
                                                                                    AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
DEFINITION
                                                                                                     DEFINITION
                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
AR021007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AX012284
                                                  RESULT 9
AX012290
                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                         PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: Wo 995586-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 51 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                     ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95.7%; Score 35.4; DB 6; Length 57; 64.9%; Pred. No. 3.3; 1; Indels 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 57;
                                                                                                                                                                                                         linear
                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                   Length
                                                   1;
                                                                                                       1 GGGTCCACCTCCTCGCGGTCCGTCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGTCCACCTCCTCGCGGTCCGAACTGGGCATGCGGC 37
                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCGCC 37
                   . 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="caxon:02630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="synthetic nucleic acid"
                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95.7%; Score 35.4; DB
64.9%; Pred. No. 3.3;
iive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                            synthetic construct other sequences.
                   ;; Score 35.4; Dl;; Pred. No. 3.3; 12; Mismatches
                                                                                                                                                                                                    Sequence 50 from Patent W09955856. AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57 bp
Sequence 51 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                          AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012289.1 GI:9998350
                 Query Match
Best Local Similarity 64.9%;
Matches 24; Conservative 1
                                                                                                                                                                                                                                                                                             synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 64.99
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                    RESULT 7
AX012288
LOCUS
                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
AX012289
                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

g

Gaps

.

PAT 29-SEP-1999

ACCESSION VERSION KEYWORDS

ORGANISM

SOURCE

REFERENCE AUTHORS TITLE JOURNAL

FEATURES

ORIGIN

```
PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 52)
Dubensky T.W. Jr., Polo,J.M., Ibanez,C.E., Chang,S.M.W.,
Jolly,D.J., Driver,D.A. and Belli,B.A.
Alphavirus vector constructs
Patent: US 5843723-A 40 01-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 52)
Dubensky,T.W. Jr., Polo,J.M., Jolly,D.J. and Driver,D.A.
Bukaryotic layered vector initiation systems
Patent: US 5814482-A 80 29-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 52;
                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
82.2%; Score 30.4; DB 6;
Best Local Similarity 59.4%; Pred. No. 2.1e+02;
Matches 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82.2%; Score 30.4; DB 6; 59.4%; Pred. No. 2.1e+02; tive 12; Mismatches 1;
                                                82.2%; Score 30.4; DB 6; 59.4%; Pred. No. 2.1e+02; iive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                       1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52 bp
Sequence 40 from patent US 5843723.
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .52
/organism="unknown"
/mol_type="unassigned DNA"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                        Sequence 80 from patent US 5814482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: March 15, 2005, 18:04:55 Job time: 732.614 secs
                                                                                                                                                                                                                                       25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
                                                                                                                                                                                                                                                                                          AR043462.1 GI:5964470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:5990028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 59.44
Matches 19; Conservative
                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                          Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
                                                                  Local Similarity
nes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR062337.1
                                                                                                                                                                                                                                       AR043462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                       Matches
                                                                                                                                                                                                                    AR043462
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 05-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
And Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 80 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 29-SEP-1999
                                                                                                      1 (bases I to 52)
Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
and Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 40 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 581482-A 40 29-SEP-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                          Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                          82.2%; Score 30.4; DB 6; 59.4%; Pred. No. 2.1e+02; iive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82.2%; Score 30.4; DB 6; 59.4%; Pred. No. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                               1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12, Mismatches

    .52
    /organism="unknown"
    /mol_type="unassigned DNA"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 80 from patent US 5789245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52 pp
Sequence 40 from patent US 5814482.
AR043422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .52
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR043422.1 GI:5964430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR021047.1 GI:3975662
                      GI:3975622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19; Conservative
                                                                                                                                                                                                                                                                                                         Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
Unclassified.
                                                                          Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unclassified.
     AR021007
AR021007.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR043422
                                                    .
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jnknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
```

ORGANISM

RESULT 12 AR021047

ઠે g REFERENCE AUTHORS

TITLE JOURNAL

FEATURES

ORIGIN

ö

Gaps

ö

ö

Gaps

ö

ORGANISM

KEYWORDS

SOURCE

REFERENCE

DEFINITION ACCESSION VERSION

RESULT 13 AR043422 LOCUS

Matches

d

AUTHORS TITLE JOURNAL

THIS PAGE BLANK (MEETB)

us-09-699-667e-63.siz.rnpb

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

March 15, 2005, 15:52:23 ; Search time 241.636 Seconds (without alignments) 910.856 Million cell updates/sec OM nucleic - nucleic search, using sw model Run on:

US-09-699-667E-63 Title: Perfect score:

1 ggguccaccuccucgcggunnnnnugggcaugcgcc 37 IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Scoring table: Sequence:

5537552 segs, 2974263231 residues Searched:

5307542 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 60

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Published Applications NA:\* Database

| (gnz 6/ptodata/1/pubpna/US07 PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US07 PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US06\_NEW\_PUB. seq:\*
| (gnz 6/ptodata/1/pubpna/US06\_NEW\_PUB. seq:\*
| (gnz 6/ptodata/1/pubpna/US06\_NEW\_PUB. seq:\*
| (gnz 6/ptodata/1/pubpna/DEW\_PUB. seq:\*
| (gnz 6/ptodata/1/pubpna/DEW\_PUB. seq:\*
| (gnz 6/ptodata/1/pubpna/US08\_NEW\_PUB. seq:\*
| (gnz 6/ptodata/1/pubpna/US08\_PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US08\_PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US09\_PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US09\_PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US09\_PUBCOMB. seq:\*
| (gnz 6/ptodata/1/pubpna/US10A\_PUBCOMB. seq:\*
|

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

/cgn2\_6/ptodata/1/pubpna/US60\_PUBCOMB.seq

## SUMMARIES

		Appl	Appl	Appl	Appl	Appl	Appl	Appli	25, A	, App	App,	App
		40,	80,	40,	80,	39,	39,	. '	183	381	382	381
	Description	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence 7, Appli	Sequence	Sequence 381, App	Sequence	Seguence
	ΔI	US-10-346-880-40	US-10-346-880-80	US-10-150-407-40	US-10-150-407-80	US-09-507-362-39	US-10-391-441-39	US-09-991-262-7	US-09-908-975-18325	US-09-864-636A-381	US-09-864-636A-382	US-09-864-426A-381
	80	17	17	17	17	10	17	10	10	10	10	11
	Query e Match Length DB ID	52	52	52	52	26	26	39	9	33	33	33
dР	Query Match	82.2	82.2	82.2	82.2	78.4	78.4	60.5	60.5	59.5	59.5	59.5
	Score	30.4	30.4	30.4	30.4	29	29	22.4	22.4	22	22	22
	Result No.	-	7	٣	4	Ŋ	9	7	80	σ	10	11
	Res	!							υ	U		U

Sequence 382, App Sequence 381, App Sequence 382, App Sequence 5, Appli Sequence 1234, App Sequence 9, Appli Sequence 38, Appli	33,000	244,	28, A 85, A 29, A 118, 106,	Sequence 107, App Sequence 108, App Sequence 59, App 39 Sequence 1303, A 275 Sequence 867275, Sequence 6, Appli Sequence 20, Appli Sequence 312, Appli
US-09-864-426A-38. US-10-084-839-381 US-10-084-839-382 US-09-812-186-5 US-09-961-077-123 US-10-103-480-9 US-10-103-480-9	-112-814-3 -813-638-7 -908-975-6 875-338-33 -077-023-3 -393-815-8	US-10-224-683-45 US-10-380-438-10 US-09-908-975-174 US-10-719-900-343 US-10-731-550-2	US-09-999-220B-28 US-09-999-220B-95 US-09-999-220B-97 US-10-363-552-29 US-10-257-398-9 US-10-628-109-106	US-10-628-109-109 US-10-628-109-108 US-10-316-754-59 US-10-31-827-3901 US-09-908-975-3901 US-09-953-052-6 US-09-953-052-0872 US-09-989-722-332
113 6 113 113 113 113 113 113 113 113 11	9 1 1 6 1 7 1	16 10 19 18	100 100 178 178	118 117 110 110 110 110 110
<b></b>	9 3 3 6 5 4 5 9 9 9 1 6	441 60 30 30	33 33 34 35 35 35 35 35 35 35 35 35 35 35 35 35	2 4 4 9 2 6 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	58.9 58.9 5.7 5.7 5.7 8.7 8.7 8.7 8.7 8.0	57.3 56.8 56.8 56.2	56.2 56.2 56.2 55.7 55.7 55.7	2000 2000 2000 2000 2000 2000 2000 200
000000000	21.2 21.8 21.8 21.18 21.44 4.14	21.2 21 21 20.8 20.8	6.66 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	000000000000000000000000000000000000
12 13 14 15 17 17	22222	2 5 5 7 6 2 6 2 6 9 8 7 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	33333393999999999999999999999999999999	0 0 0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
O	υ	υυ	0 0 0 0 0 0 0	00 000 00

## ALIGNMENTS

WESULO.

WESULO.

WESULO.

Sequence 40, Application US/1034680

Publication No. US2030232035A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W

APPLICANT: Delo., John M

APPLICANT: Delo., John M

APPLICANT: Chang, Stephen M.W.

APPLICANT: Chang, Stephen M.W.

APPLICANT: Belli, Barbara A

APPLICANT: Belli, Barbara A

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS

FILE REFERENCE: PPO1146\_213 (CHIR-1146/11US)

CURRENT FILING DATE: 2003-01-16

FRIOR PILING DATE: 2003-02-11

PRIOR APPLICATION NUMBER: 08/739,199

PRIOR PILING DATE: 1996-11-12

PRIOR PILING DATE: 1996-11-12

PRIOR PILING DATE: 1996-10-30

PRIOR PILING DATE: 1996-10-30

PRIOR PILING DATE: 1996-10-16

PRIOR PILING DATE: 1996-00-15

PRIOR PILING DATE: 1996-00-15

PRIOR PILING DATE: 1996-00-16

PRIOR PILING DATE: 1996-00-18

```
APPLICANT: Dubensky Jr, Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-346-880.

Sequence 80, Application US/10346880

Publication No. US20030232035A1

GENERAL INPORMATION:

APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Dubensky Jr., Thomas W
APPLICANT: Danea. Carlos E
APPLICANT: Danea. Carlos E
APPLICANT: Danea. Stephen M.W.

APPLICANT: Danea. Stephen M.W.

APPLICANT: Danea. Stephen M.W.

APPLICANT: Darier, David A
APPLICANT: Darier, David A

APPLICANT: Darier, David A

APPLICANT: District David A

APPLICANT: Darier, David A

APPLICANT: BUTANTON UNMBER: 09/101,747

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1994-01-18

PRIOR FILING DATE: 1994-02-18

PRIOR FILING DATE: 1993-09-15

NUMBER OF SEQ ID NOS: 128

NUMBER OF SEQ ID NOS: 128

SOSTWARRE: FaetSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
OTHER INFORMATION: Artificial sequence: reverse primer HKV17-68
                                                                                                                ) OTHER INFORMATION: Artificial sequence: nested primer HDV17-68
US-10-346-880-40
                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82.2%; Score 30.4; DB 17;
59.4%; Pred. No. 2.7;
iive 12; Mismatches 1;
                                                                                                                                                                                                       82.2%; Score 30.4; DB 17;
59.4%; Pred. No. 2.7;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                       1 TCCACCTCCTCGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 40, Application US/10150407 Publication No. US20040029278A1 GENERAL INFORMATION:
                                                                                                                                                                                            Query Match
Best Local Similarity 59.4%
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 59.4<sup>a</sup>
Matches 19; Conservative
SEQ ID NO 40
LENGTH: 52
TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
US-10-150-407-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-346-880-80
                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                             ð
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 80, Application US/10150407

Publication No. US20040029278A1

GENERAL INFORMATION:

APPLICANT: Dubensky Jr., Thomas W

Polo, John M.

Driver, David A.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS

NUMBERS OF SEQUENCES: 128

CORRESPONDENCE ADDRESS:

ADDRESSEE: SEED and BERRY LLP

STREET: 6300 Columbia Center, 701 Fifth Avenue

CITY: Seattle

STATE: Washington

COUNTRY: US

ZIP: 98104-7092

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible

COMPUTER: IBM PC COMPATIBLE IBM PC COMPATIBLE

SOFTWARE: PatentIn Release #1.0, Version #1.25
Diver, David A.

TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 52;
                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIFTCATION : CURKNOWN>
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: MCMGGEES, David D.
REGISTRATION NUMBER: 33,963
REFRENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
82.2%; Score 30.4; DB 17;
Best Local Similarity 59.4%; Pred. No. 2.7;
Matches 19; Conservative 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
TOPOLOGY: linear;
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
US-10-150-407-40
                                                                                                                                                                                                                                                           COUNTRY: US
TEP: 98104-7092.
COMPUTER READABLE FORM.
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (206) 622-4
TELEPAX: (206) 682-603
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
```

Length 56;

```
; TOPOLOGY: linear
; SEQUENCE DESCRIPTION: SEQ ID NO: 39:
US-09-507-362-39
                                                                                                                                                                                                                                                                                                                                                       US-10-391-441-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-391-441-39
                                                                                                                                         Query Match
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Intellectual Property Law Group PLLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 52;
                                                                                     PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/350,522

ATTORNEY/AGENT INFORMATION:

NAME: MCMASters, David D.

REGISTRATION NUMBER: 33,963

REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010

TELECOMMUNICATION INFORMATION:

TELEPHONE: (206) 622.4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.457D6 /1196.011
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/507,362
FILING DATE: 18-Feb-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.2%; Score 30.4; DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 701 Fifth Avenue, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 rccaccrccrcgcggrccgaccrgggcarccg 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59.4%; Pred. No. 2.7; tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: Washington
COUNTRY: USA
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/150,407
FILING DATE: 17-May-2002
CLASSIFICATION: cUnknown>
                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-09-507-362-39
IS-09-507-362-39
Sequence 39, Application US/09507362
Publication No. US20030096397A1
GENERAL INFORMATION:
HOLO, John M.
Belli, Barbara A.
Schlesinger, Sondra Dryga, Sergey A.
Frolov, Ilya
TITLE OF INVENTION: RECOMBINANT ALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                      TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 59.4%
Matches 19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-150-407-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
d
```

```
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS-BASED VECTORS
WITH REDUCED INHIBITION OF CELLULAR MACRO-MOLECULAR
SYNTHESIS
                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                               Gaps
                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Seed Intellectual Property Law Group PLLC STREET: 701 Fifth Avenue, Suite 6300 CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 98104-7092

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/391,441
FILING DATE: 17-Mar-2003
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/507,362

TILING DATE: 18-Feb-2000

ATTORNEY/AGENT INFORMATION:
NAME: MCMAsters, David D.

REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 33,963

TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION:
(206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                               ö
78.4%; Score 29; DB 10;
58.6%; Pred. No. 9.4;
iive 12; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78.4%; Score 29; DB 1
58.6%; Pred. No. 9.4;
ttive 12; Mismatches
                                                                                                              27 TCCACCTCCTCGCGGTCCGACCTGGGCAT 55
                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                     Sequence 39, Application US/10391441
Publication No. US20030232058A1
GENERAL INFORMATION:
APPLICANT: Dubensky Jr., Thomas W.
Polo, John M.
Belli, Barbara A.
Schlesinger, Sondra
Dryga, Sergey A.
Frolov, Ilya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (206) 682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Washington
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 58.55
East Local 7; Conservative
                        Best Local Similarity 58.6
Matches 17, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
```

```
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE N.
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND SPLICE N.
FILE REFREBNCE: 36689-0005
CURRENT APPLICATION NUMBER: US/09/908,975
CURRENT FILING DATE: 2001-07-20
PRIOR APPLICATION NUMBER: US 60/287,724
PRIOR PILING DATE: 2000-07-28
NUMBER OF SEQ ID NOS: 32337
SOFTWARE: Patentin version 3.0
SEQ ID NO 18325
LENGTH: 60
TYPE: DNA
ORGANISM: Homo sapiens
US-09-908-975-18325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60.5%; Score 22.4; DB 10;
50.0%; Pred. No. 3.2e+03;
tive 10; Mismatches 6;
FAIGLER, Simchon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 50.09
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-864-636A-381/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-864-636A-381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-864-636A-382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .<u>`</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr Hohbach Test Albritton & Herbert LLP
STREET: Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 39;
                                                                                                                UDICACION. W. W. W. W. B. D. Gordon, K. H.J., Hanzlik, APPLICANT: Christian, P. D., Gordon, K. H.J., Hanzlik, IITLE OF INVENTION: Insect Viruses and Their Uses in Protecting Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                              CITY: San Francisco
STATE: California
COUNTRY: United States
ZIE: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/991,262
FILING DATE: 20-00. US20030041349A1-2001
CLASSIFICATION: UNANOMNO-
PRIOR APPLICATION SUMBER: US/09/234,238
FILING DATE: 20-0AN-1999
APPLICATION NUMBER: US 08/485,355
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/440,522
FILING DATE: 12-MAY-1995
APPLICATION NUMBER: US 08/089,372
FILING DATE: 08-JUL-1993
APPLICATION NUMBER: US 08/089,372
FILING DATE: 14-MAY-1995
APPLICATION NUMBER: US 08/089,372
FILING DATE: 14-MAY-1995
APPLICATION NUMBER: US 08/089,372
FILING DATE: 14-MAY-1993
APPLICATION NUMBER: US 08/081/92
FILING DATE: 14-MAY-1993
APPLICATION NUMBER: US 08/081/92
FILING DATE: 14-MAY-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Trecartin, Richard F.
REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: A-58631-3/RFT/DSS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60.5%; Score 22.4; DB 10;
58.3%; Pred. No. 3.2e+03;
iive 9; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: DNA
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-991-262-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 CCUCCUCGCGGUNNNNNUGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16 CCTCCTCGCGGCGCCGGATGGGCA 39
                                                                         Sequence 7, Application US/09991262
Publication No. US20030041349A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 39 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: 910 277299 INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 58.3
Matches 14; Conservative
                      RESULT 7
US-09-991-262-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
```

ô

Gaps

ö

Indels

Length 60;

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 59.5%; Score 22; DB 10; Length 33
Best Local Similarity 53.3%; Pred. No. 4.5e+03;
Matches 16; Conservative 9; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 381, Application US/09864636A

Publication No. US20030104378A1

GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Publication No. US20030104378A1

Publication No. US20030104378A1

GENERAL INFORMATION:

APPLICANT: Third Wave Technologies

APPLICANT: Allwai, Hatim

APPLICANT: Allwai, Hatim

APPLICANT: Chehak, LuAnne

TITLE OF INVENTION: Detection of RNA Sequences

FILE REFERENCE: FORS-04944

CURRENT FILLING DATE: 2002-10-15

NUMBER OF SEQ ID NOS: 2640
                                                                2 GGUCCACCUCCCCCGGUNNNNNUGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGUCCACCUCCUCGCGGUNNNNNUGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Synthetic
```

Sequence 18325, Application US/09908975
Publication No. US20030165843A1
GENERAL INFORMATION:
APPLICANT: SHOSHAN, Avi
APPLICANT: MASSERMAN, Alon
APPLICANT: MINTZ, Eli
APPLICANT: MINTZ, Liat

RESULT 8 US-09-908-975-18325/c

Gaps

ö

```
Ouery Match 59.5%; Score 22; DB 16; Length 33; Best Local Similarity 53.3%; Pred. No. 4.5e+03; Matches 16; Conservative 9; Mismatches 5; Indels
      Length 33;
Query Match

S9.5%; Score 22; DB 11;
Best Local Similarity 53.3%; Pred. No. 4.5e+03;
Matches 16; Conservative 9; Mismatches 5
                                                                                                                                                                      3 GGTCCACCTCCAGGAGGAGGTCGGTGCGCA 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGUCCACCUCGCGGUNNNNNUGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Neri, Bruce P.
APPLICANT: Olson, Sarah M.
APPLICANT: Olson, Marilyn C.
APPLICANT: Schaefer, James J.
APPLICANT: Skrzypczynski, zbigniew
APPLICANT: Takova, Tsetska Y.
APPLICANT: Takova, Tsetska Y.
APPLICANT: Takova, Tsetska Y.
APPLICANT: Tokova, Kevin L.
TITLE OF INVENTION: NAN Detection Assays
FILLE REFERENCE: FORS-06666
FURBRY APPLICATION NUMBER: US/10/084,839
CURRENT FILLING DAIE: 2002-02-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31 GGTCCACCTCCAGGAGGAGGTCGGTGCGCA
                                                                                                                                    2 GGUCCACCUCCUCGCGGUNNNNNUGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Allawi, Hatim
Argue, Brad T.
Bartholomay, Christian T.
Chehak, LuAnne
Curtis, Michelle L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Allawi, Hatim
Argue, Brad T.
Bartholomay, Christian T.
Chehak, LuAnne
Curtis, Michelle L.
Eis, Peggy S.
                                                                                                                                                                                                                                                                                                                                                      Sequence 381, Application US/10084839 Publication No. US20030186238A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-084-839-382
iSequence 382, Application US/10084839
; Publication No. US20030186238A1
; PUBLICATION No. USCOUNTY NO. USANDALICANT: Third Wave Technologies
                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Third Wave Technologies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lymaicheva, Natalie E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 2002-02-26
NUMBER OF SEQ ID NOS: 4004
SCFTWARE: PatentIn version 3.1
LENGTH: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kwiatkowski, Jr., Rc
Lukowiak, Andrew A.
Lyamichev, Victor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kaiser, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eis, Peggy S.
Hall, Jeff G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ip, Hon S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-084-839-381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                    Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ma, Wu Po
APPLICANT: Lyamichev, Victor
APPLICANT: Saiser, Michael
TITLE OF INVENTION: Enzymes for the Detection of RNA Sequences
CURRENT APPLICATION NUMBER: US/09/864,426A
CURRENT FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 2460
SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 382, Application US/09864426A

Publication No. US20040018489A1

GENERAL INFORMATION:
APPLICANT: Third Wave Technologies
APPLICANT: Ma, Wu Po
APPLICANT: Lyamichev, Victor
APPLICANT: Salaser, Michael
TITLE OF INVENTION: Enzymes for the Detection of RNA Sequences
FILE REFERENCE: FORS-04946
CURRENT APPLICATION NUMBER: US/09/864,426A
CURRENT FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 2640
SOFTWARE: Patentin version 3.0
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 22; DB 11; Length 33;
Pred. No. 4.5e+03;
9; Mismatches 5; Indel8
                                                                                                                                                                                                                                                                                       Score 22; DB 10; Length 33;
Pred. No. 4.5e+03;
9; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGUCCACCUCCUCGCGGUNNNNNUGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GGTCCACCTCCAGGAGGAGGTCGGTGCGCA 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGUCCACCUCCUCGCGGUNNNNNUGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59.5%;
   SOFTWARE: Patentin version 3.0 SEQ ID NO 382
LENGTH: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 53.3%;
Matches 16; Conservative
                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic
US-09-864-636A-382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic US-09-864-426A-382
                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 53.3
Matches 16, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
US-09-864-426A-381/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-864-426A-381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
US-09-864-426A-382
                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

ö

```
RESULT 15
US-09-812-186-5

i Sequence 5, Application US/09812186

j Sequence 5, Application US/09812186

j Patent No. US2002002037A1

j GENERAL INFORMATION:

j TITLE OF INVENTION: NUCLEIC ACID CATALYSTS COMPRISING L-NUCLEOTIDE ANALOGS

j TITLE OF INVENTION: NUMBER: US/09/812,186

j CURRENT PAPLICATION NUMBER: (05/042,464

j PRIOR APPLICATION NUMBER: 09/048,825

j RIOR APPLICATION NUMBER: 09/048,825

j RIOR APPLICATION NUMBER: 09/048,825

j NUMBER OF SEQ ID NOS: 11

j SEQ ID NO 5: 11

j ENGTH: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Description of Artificial Sequence: Hepatitis OTHER INFORMATION: Delta Virus (HDV) Ribozyme.
NAME/KEY: misc feature
LOCATION: (18)...(24)
OTHER INFORMATION: all n's can represent any one of a, c, g, or use-09-812-186-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 59.5%; Score 22; DB 16; Length 33; Best Local Similarity 53.3%; Pred. No. 4.5e+03; Matches 16; Conservative 9; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 59.5%; Score 22; DB 9; Length 49; Best Local Similarity 100.0%; Pred. No. 4.5e+03; Matches 22; Conservative 0; Mismatches 0; Indels
                                                                                                                                                           APPLICANT: Neri, Bruce P.
APPLICANT: Olson, Sarah M.
APPLICANT: Olson, Wanoz, Marilyn C.
APPLICANT: Schaefer, James J.
APPLICANT: Schaefer, James J.
APPLICANT: Takova, Tsetska Y.
APPLICANT: Trompson, Lisa C.
APPLICANT: Thompson, Lisa C.
APPLICANT: Thompson, Lisa C.
APPLICANT: Wedvik, Kevin L.
TITLE OF INVENTION: RNA Detection Assays
FILE REFERENCE: FORS. 2066
CURRENT APPLICATION NUMBER: US/10/084,839
CURRENT FILING DATE: 2002-02-26
NUMBER OF SEQ ID NOS: 4004
SEQ ID NO 382
LENGTH: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGUCCACCUCCUCGCGGUNNNNNGGGCA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GGTCCACCTCCAGGAGGAGGTCGGTGCGCA 32
Ji, Lin
Kaiser, Michael
Kwiatkowski, Jr., Robert W.
Lukowiak, Andrew A.
Lyamichev, Victor
Lyamicheva, Natalie E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: RNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic US-10-084-839-382
     APPLICANT:
APPLICANT:
                                                                             APPLICANT
APPLICANT
                                                                                                                          APPLICANT
                                                    APPLICANT
                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
Search completed: March 15, 2005, 21:09:22 Job time: 242.636 secs
2 UCCACCUCCUCGCGGUNNNNN 23
                   셤
 Hall, Jeff G.
```

Gaps

ö

4 UCCACCUCCUCGCGGUNNNNN 25

A2805592 2M0067M01 BH413716 100703480 A1493595 T. brucei CR360020 Arabidops BE782448 601467568 A4481441 T. brucei BG721695 602695848 BK556320 Arabidops CC940306 0150420-0 CM020376 GC0636 TI A2804709 2M006501 A2537682 AST-DHP(4 A2537682 AST-DHP(4 A259744 Arabidops AU106546 AU106546 AU106547 AU106547 AU106547 AU106547 AU106549 CR028335 FOrward B		DNA linear GSS 08-JAN-2004 Library Zea mays genomic clone quence.  yta; Embryophyta; Tracheophyta; psida; Poales; Poaceae; PACCAD Zea.  and McCarty, D.R.	ons from the UniformMu maize Iy Program	idrm@ufiledu  ince flanking probable Mu insertion site in UniformMu line:  88-04, Primer 8ct: D  1. cyanism="Zea mays"   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation/Qualifiers   coation="Zea mays"   coation="Zea mays"   colliva="UniformMu"   clone 11b="UniformMu"   clone 11b="UniformMu MuTali Library"   clone 11b="UniformMu MuTali Library"   clone 11b="UniformMu muTali Library"   clone 11b="UniformMu muTali Library"   clone 11b="UniformMu marale population by the thermo assymmetric   interlaced PCR (TAIL) protocol using primers specific for the Mu terminal inverted repeat and set of 16 arbitrary primers. Amplicons were size enriched using Sepharose 400 spin columns and cloned into the TOPO PCR4 vector."  60.5%; Score 22.4; DB 9; Length 57;
9.8 53.5 49 8 AZ805592 9.8 53.5 51 8 BH413716 9.8 53.5 57 9 TR348B10P 9.6 53.0 35 9 CR340020 9.6 53.0 55 9 TR34B112P 9.6 53.0 65 9 TR34B112P 9.6 53.0 65 9 TR34B112P 9.4 52.4 40 9 CC940306 9.4 52.4 40 9 CC940306 9.4 52.4 52 8 AZ305836 9.2 51.9 47 9 AJ599744 9.2 51.9 50 1 AU106546 9.2 51.9 50 1 AU106549 9.2 51.9 50 1 AU106549 9.2 51.9 50 1 AU106549 9.2 51.9 50 1 AU106549 9.2 51.9 50 1 AU106549	ALIGNMENTS	CL234247  CL234247  ON 0280288-04D1-A12 UniformMu MuTAIL Library Zea mays genomic clone 0280288-04D1-A12, genomic survey sequence.  CL234247  CL234247.1 GI:40778227  GSS.  Zea mays  Enkaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.  Enkaryota; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.  I (bases 1 to 57)  Latshaw, S., Tan, BC., Settles, A.M. and McCarty, D.R.	Sequence tagged transposon insertions fro population population Contact: Donald R. McCarty Plant Molecular and Cellular Biology Prog University of Florida PO 110690 Gainesville, FL 32611-0690, USA	ch ch ch
000 0 0 000000 0 000000 0 000000 0 00000		RESULT 1 CL234247 LOCUS DEFINITION ACCESSION VEXWORDS SOURCE ORGANISM REFERENCE AUTHORS	TITLE JOURNAL COMMENT	FEATURES SOURCE SOURCE ORIGIN ORIGIN Best Local
n 5.1.6  Compugen Ltd.  Search time 1488.44 Seconds (without alignments) 946.212 Million cell updates/sec ugggcaugcgcc 37 residues meters: 241816		loted by chance to have a	e score of the result being printed, total score distribution. MARIES  Description	CL234247 02S0288-0 CR056194 NISC_jx01 CR051509 NISC_jx01 CR021509 Reverte 8 H23825 yn71e03.s1 AA212965 zr69a04.8 A168077 wa83403.x CR002872 Porward 8 CR101542 Reverte 8 CG74893 1123021A1 A144173 t191e12.x A1612870 tx20f12.x A162870 tx20f12.x AA612870 tx20f12.x AA612870 tx20f12.x AA65290 SBF 142 G CAA8748 of85D02.8 CR214675 OML04955 AA530920 n147a05.8 AZ585629 1M0390X23 BM399132 50072-2-7 A1956143 W135e01.x AU104848 AU104848 CC219350 01S0473-0 AL953488 Arabidops
GenCore versic  Copyright (c) 1993 - 2005  - nucleic search, using sw model  March 15, 2005, 15:20:59 ;  US-09-699-667E-63  Ore: 37  1 gguccaccuccucgcgunnnnn.  ble: IDENTITY NUCDX Gapop 10.0 , Gapext 1.0  34239544 seqs, 19032134700  er of hits satisfying chosen para	seg le	Minimum Match 0% Maximum Match 100% Listing first 45 summa EST:* 1: 9D-est1:* 2: 9D-est2:* 3: 9D-htc:* 4: 9D-est3:* 5: 9D-est4:* 6: 9D-est5:* 7: 9D-est6:* 8: 9D-est6:* 9: 9D-est6:* 9: 9D-est6:* 18 the number of result	greater than or equal to the derived by analysis of the SUM   \$ Query  The Match Length DB ID	220 22 22 22 22 22 22 22 22 22 22 22 22
OM nucleic Run on: Title: Perfect sc Sequence: Scoring ta Searched:	Minimum DB Maximum DB	Post-processing Database :	200	00 00 000 00 000 1000 00 00 000 11111111

Matches

ð 셤 CB058194/c DEFINITION

RESULT 2

ACCESSION

REFERENCE AUTHORS TITLE

JOURNAL

COMMENT

```
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalla, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 50) Adams, Lo. 50, Lo. 5, Lo. 5, Lo. 5, Lo. 6, Lo. 7, Lo. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: est@watson.wustl.edu
Insert Size: 1506
High quality sequence state: 1
High quality sequence stops: 1
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Trace considered overall poor quality
Possible reversed clone: similarity on wrong strand
Insert Length: 1506 Std Error: 0.00
Seq primer: Promega -2Iml.3
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
I (bases I to 49)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 bp mRNA linear EST 06-JUL-1
yn71e03.s1 Soares adult brain N2bSHB55Y Home aapiens cDNA clone
IMAGE:1713884 3' similar to Sp.539059 S39059 BR01 PROTEIN -
;contains TAR1 repetitive element ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilson,R.
The WashJ-Merck EST Project
Unpublished (1995)
Contact: Wilson RK
Washington University School of Medicine
4444 Porcest Park Parkway, Box 8501, St. Louis, MO 63108
Fax: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 58.4%; Score 21.6; DB 9; Best Local Similarity 47.2%; Pred. No. 1.2e+05; Matches 17; Conservative 10; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46 GGTCCCCCCCCCCCTCAGTGCTGGCTTGAACC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
GSS; genome survey sequence; MICER. Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .50
/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="MHPN387-3c12"
/clone_lib="MHPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .49
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="GDB:3835919"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H23825.1 GI:892520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
   CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H23825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: Cgapbs-r@mail.nih.gov
CDNA Library Preparation:
CDNA Library Preparation:
CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC)
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
info@image.llnl.gov
Plate: LLAMIL1068 row: I column: 7
Seq primer: T7 primer.

Seq primer: T7 primer.
                                                                                                                                                                                                                                                                              свозвиче ST 17-JAN-2003
NISC_jx01e04.wl Soares NMBPA Mus musculus cDNA clone IMAGE:5023950
5′, mRNA sequence.
       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reverse strand read from insert in 5'HPRT insertion targeting and chromosome engineering clone MHPN387-3c12, genomic survey sequence. CR021509.1 GI:49754564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        double-stranded cDNA was ligated to EcoRI adaptors 5'-AATTCGGCACGAGG-3' AND 5'-CCTCGTGCCG-3' (Pharmacia), digested with NotI and cloned into the NotI and EcoRI sites of the pT/T3D-PacI vector. Library went through one round of normalization, and was constructed in the laboratory of M. Bento Soares (University of Iowa)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Bukaryota; Metazoa; Chordata; Criurognathi; Muridae; Murinae; Mus. 1 (Dases 1 to 54)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="pituitary gland"
/dev stage="adult"
/lab_host="DH10B (phage-resistant)"
/clone_llb="Soares NMBPA"
/note="Organ: brain; Vector: pT7T3D-Pac1; Site_1: Not1;
Site_2: EcoR1; 1st strand cDNA was primed with a Not1 -
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.9%; Score 21.8; DB 6; Length 5. 45.5%; Pred. No. 9.8e+04; tive 11; Mismatches 7; Indels
   Indels
       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43 CCTGTTCCTCTCGGTATGGATGCGGGTGCGCC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                       5 CCACCUCCUCGCGGUNNNNNUGGGCAUGCGC 36
   Mismatches
                                                                                                              11 CCAGCAGCTTGCGGAGTGGACTGCGCATGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="IMAGE:5023950"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oligo(dT) primer
   6
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CB058194.1 GI:27796481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 45.59
Matches 15; Conservative
   17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA
CB058194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 3
CR021509/c
```

FEATURES

DEFINITION

LOCUS

셤

ORIGIN

ACCESSION VERSION

ö

Gaps . 0

EST 06-JUL-1995

```
RESULT 6
A1688077/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                         8
       Eukaryota; Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
E. 1 (bases 1 to 55)
S. Hillar, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., White, Y., Wylie, T., Waterstron, R. and Wilson, R., Theising, B., White, Y., Wylie, T., Waterstron, R. and Wilson, R., Theising, B., Washb-Merck EST Project 1997
L. Unpublished (1997)
Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zz69a04.81 Soares NhHMPu S1 Homo sapiens cDNA clone IMAGE:668622 3' similar to SW:UCEX BOVIN P000130 UBIQUINOL-CYTOCHROME C REDUCTASE COMPLEX 7.2 KD PROTEIN ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Trace considered overall poor quality Possible reversed clone; similarity on wrong strand Insert Length: 560 Std Error: 0.00 Seg primer: -41m13 fwd. ET from Amersham High quality sequence stop: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                       57.8%; Score 21.4; DB 7; Length 49; 52.2%; Pred. No. 1.4e+05; ive 10; Mismatches 1; Indels
stage="55-year old"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="GDB:5562589"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26 GTCCACCTCCTTGCGGTGGCGGG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GUCCACCUCCUCGCGGUNNNNN 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA232965.1 GI:1856126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                          12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA232965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA232965/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

```
/donelle="Goares NhHMPu S1"
/clone lib="Goares NhHMPu S1"
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/Pharmacia with a modified polylinker; Sitel: Not I;
Site EC RI; Equal amounts of plasmid DNA_from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NDHPU, and fettal heart NDHH19W) were mixed, and ss circles
were made in vitro. Following HAP purification, this DNA
was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified cDNAs from pools of
5,000 clones made from the same 3 libraries. The pools
consisted of I.M.A.G.E. clones 260232-265223,
340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  // Aref="taxon:9606"

/ Ab xref="taxon:9606"

/ Ab xref="taxon:9606"

/ Ab onet="IMARS:2302757"

/ Lab host="URARS:2302757"

/ Lab host="DAINOB"

/ Clone=lib="Soares NFL T_GBC_S1"

/ Clone lib="Soares NFL T_GBC_S1"

/ CGAP_GBD] were mixed, and se dircles were made in virro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of 1.M.A.G.B. clones 297480-302087, 682532-687239, 726408-728711, and 729096-731399. Subtraction by Bento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 07-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Primates; Catarrhin; Hominidae; Homo.

1 (bases 1 to 31)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP); Tumor Gene Index
Unpublished (1997)
/clone="IMAGE:668622"
/tismuc_type="Pooled human melanocyte, fetal heart, and pregnant uterus"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

This clone is available royalty-free through LLNL; contact the

IMAGE Consortium (info@image.llnl.gov) for further information.

Trace considered overall poor quality

Insert Length: 1191 Std Brror: 0.00

Seq primer: -40UP from Gibco

High quality sequence stop: 1.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AI688077

wa83d03.x1 Soares NFL T GBC S1 Homo sapiens cDNA clone
IMAGE:2302757 3' SimiTar to SW:EXT1_HUMAN Q16394 EXOSTOSIN-1
;contains MER22.t1 MER22 repetitive element ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 57.3%; Score 21.2; DB 1; Length 55; Best Local Similarity 50.0%; Pred. No. 1.6e+05; Matches 17; Conservative 9; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGC 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AI688077.1 GI:4899371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AI688077
```

Gaps

ö

Query Match

ORIGIN

Matches

DEFINITION

RESULT 7 CR002872

g

ACCESSION

VERSION

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS

```
/dev stage="teat".
/dev stage="dult"
/lab_host="adult"
/lab_host="byll0B"
/clone lib="lil23 - RescueMu Grid L"
/note="Organ: leaf; Vector: RescueMu (engineered from palueScript backbone); Site 1: BamHi; Site 2: BglII;
RescueMu is a 4.9 kb, modified maize Mu transposon designed to allow plasmid rescue from total genomic DNA. Mu elements insert preferentially into transcription units. For more information on RescueMu, go to the web site, www.radh.iastate.edu' and follow the links for KescueMu. Grid L was grown in Moloka in 2001. DNA was extracted from leaf strips, double digested using BamHI and BglII, and ligated to form circular plasmids. DH10B ampicillin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CG774833 1123 - 43 bp DNA linear GSS 29-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maize genomic sequences found using engineered RescueMu transposon
Unpublished (2001)
Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta;
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, 2ea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Department of Biological Sciences
Stanford University
Stanford University
Stanford University
Stanford University
Tel: 650 723 2227
Fax: 650 725 8221
Fax: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic_DNA"
/cultivar="mixed background W23/A188/B73/K55"
/cissue_type="leaf"
/tissue_type="leaf"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 43;
                                                                                                                                                                    56.8%; Score 21; DB 9; Length 58; 45.9%; Pred. No. 1.9e+05; tive 10; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56.2%; Score 20.8; DB 9;
43.8%; Pred. No. 2.2e+05;
tive 11; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                         44 GGGACAACTTCCTGGCCTTTTGATTAGGCCATGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 GGGTCCTCCTCGACCTCCATGCCGTGGAT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAU 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Class: transposon-tagged.
Location/Qualifiers
/clone="MHPP224d18"
/clone_lib="MHPP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CG774833.1 GI:38031262
                                                                                                                                                                                                                                                       17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 43.8 Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 43)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 survey sequence.
CG774833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .43
                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
CG774833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CR002872
CR002872
CR002872
CR002872
CR02872
CR02872.1 G:49735863
CR002872.1 CR004124
CR002872.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS 05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 58)
Adams,D.J., Biggs,P.J., Cox,A.V., Davies,R.M., van der Weyden,L., Jonkers,J., Smith,J., Plumb,R.W., Taylor,R.G., Nishijima,I., Yu,Y., Rogers,J., and Bradley,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CR101542
Reverse strand read from insert in 3'HPRT insertion targeting and chromosome engineering clone MHPP224418, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rogers, J. and Bradley, A.
Direct Submission
Submitted (20-2004) Sanger Centre, Hinxton, Cambridgeshire,
CB10 1SA, UK. http://www.sanger.ac.uk/MICER
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (20-FEB-2004) Sanger Centre, Hinxton, Cambridgeshire,
CB10 1SA, UK. http://www.sanger.ac.uk/MICER
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                    .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 21; DB 9; Length 53;
Pred. No. 1.9e+05;
6; Mismatches 10; Indels
                                                                                                                                      Length 31;
                                                                                                                                                                                                                    5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                             f; Score 21; DB 1; I
f; Pred. No. 1.9e+05;
10; Mismatches 5;
        Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CR101542.1 GI:49848942
GSS; genome survey sequence; MICER.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                      2 GGUCCACCUCCUCGCGGUNNNNNUGGGC 30
                                                                                                                                                                                                                                                                                                                                                  31 GGACCAGCTTCTCGGGCTTCCCGTTGGGC 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .53
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="MHPN206d11"
/clone_lib="MHPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56.8%;
                                                                                                                                  56.8%;
                                                                                                                                                                                                                    14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 21; Conserva
                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CR101542
```

Query Match

ORIGIN

RESULT 8 CR101542/c LOCUS SOURCE ORGANISM

REFERENCE AUTHORS

ACCESSION VERSION KEYWORDS

source

(

PEATURES

TITLE JOURNAL

source

FEATURES

TITLE JOURNAL

ö

Gaps

RESULT 10 AI445173/c LOCUS

DEFINITION

ACCESSION

VERSION KEYWORDS

SOURCE ORGANISM

REFERENCE AUTHORS TITLE

JOURNAL

COMMENT

```
Email: cgapbs-remail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vv80ell.rl Stratagene mouse skin (#937313) Mus musculus CDNA clone
IMAGE:1228748 5' similar to gb:M95525 Mouse inhibin alpha-subunit
(MOUSD);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 60)
Marray, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /lab_host="DH10B"
/clone_lib="NCI_CGAP_Ut4"
/note="Organ: ulerus; Vector: pCMV-SPORT6; Site_1: SalI;
/inote="Organ: ulerus; Vector: pCMV-SPORT6; Site_1: SalI;
/ite_2: NotI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.48 kb. Life Technologies catalog #:
11542-016"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Marka M/Mouse EST Project
Washington University School of MedicineP
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2269775"
/isoue type="gerous papillary carcinoma, high grade,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ch 55.7%; Score 20.6; DB 1; Length 58; I Similarity 51.9%; Pred. No. 2.7e+05; 14; Conservative 9; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                           ww-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                             Trace considered overall poor quality
Insert Length: 869 Std Error: 0.00
Seq primer: -40UP from Gibco
High quality sequence stop: 1
Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .58
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Waterston, R.
The WashU-HHMI Mouse EST Project
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 UCCUCGCGGUNNNNNNUGGGCAUGCGC 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA762539
AA762539.1 GI:2812286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                             POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
AA762539/c
                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tisaue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Tisaue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing Day: Washington University Genome Sequencing Center
Clone distribution: NGI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AI612870 SB bp mRNA linear EST 16-DEC-1999 tx20f12.x1 NCI CGAP Ut4 Homo sapiens cDNA clone IMAGE:2269775 3' similar to TR:Q40503 Q40503 EXTENSIN. [1]; contains MSR1.t1 MSR1 AI612870 AI612870
                                                                                EST 09-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Enamalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 43)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

    (bases 1 to 58)

                                                                                                    t191e12.x1 NCI CGAP Co14 Homo sapiens cDNA clone IMAGE:2154478 3' similar to SW:PRPM HUMAN P10161 SALIVARY PROLINE-RICH PROTEIN PO ;contains element MSR1 repetitive element ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 43;
                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
55.7%; Score 20.6; DB 1;
Best Local Similarity 51.4%; Pred. No. 2.7e+05;
Matches 18; Conservative 8; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38 GCCCCCCCCCCGGGGTTTTTTTGGGGGGGCC 4
                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trace considered overall poor quality
Seg primer: -400P from Gibco
High quality sequence stop: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .43
/organism="Homo sapiens"
                                                                                   43 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                   AI445173.1 GI:4287142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AI612870.1 GI:4622037
                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                   AI445173
                                                                                                                                                                                          AI445173
```

FEATURES

AI612870/c LOCUS

RESULT 11

임

DRIGIN

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

AUTHORS TITLE

REFERENCE

ö

Gaps

ö

N

source

FEATURES

```
AAB78748 Lis Homo sapiens cDNA clone IMAGE:1437099 3' similar to SW:VNUA FRVKA P33485 PROBABLE NUCLEAR ANTIGEN.; contains element TAR1 repetitive element; man sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CB214675 Oryza minuta HybriZAP-2.1 XR library Oryza minuta CDNA 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza minuta
Oryza minuta
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatrophyta, Magnoliophyta, Liliopsida, Poales, Poaceae,
Bhrhartoideae, Oryzeae, Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="texon:9606"
/db_xref="texon:9606"
/clone="lnAGB:1437099"
/tissue type="hepatic adenoma"
/lab_hogt="DH10B"
/clone lib="NCI CGAP_Li5"
/note="Organ: llver; Vector: pCWV-SPORT4; Site_1: Sall;
Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 0.8 kb."
                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. I bases I to 49. NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryza minuta HybrizAP-2.1 XR library
Unpublished (2003)
Contact: Jeong Sheop Shin
Plant Molecular Genetics
Graduate School of Biotechnology, University of Korea
136-701 Anam-dong 5/1 Seoul, Korea
Trl: 00 82 2 3290 3430
Fax: 00 82 2 927 9029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / Match 55.1%; Score 20.4; DB 1; Length 49; Local Similarity 50.0%; Pred. No. 3.2e+05; nes 15; Conservative 9; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown library type
Trace considered overall poor quality
Seg primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 CCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40 CCTCCTCCCGGGGGGTGTTTTGGGATCC 11
                                                                                                                                                                                                                                                                                                                                                                                    Tumor Gene Index
Inpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .49
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: jsshin@kuccnx.korea.ac.kr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CB214675.1 GI:28260766
                                                                                                                                                                      AA878748.1 GI:2987713
                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                   AA878748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shin, J.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CB214675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CB214675/c
                                                                            DEFINITION
                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                             AA878748/c
                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                    /tissue type="whole skin"
/dev_stage="11 weeks old"
/lab_host="SOLR (kanamycin resistant)"
/clone_lib="Stratagene mouse skin (#937313)"
/note="Organ: skin; Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: XhoI; Cloned unidirectionally. PrImer:
Oligo dT. Whole skin from 11 week old C57BL/6 female mice.
Average insert size: 1.0 kb; Uni-ZAP XR Vector; ~5'
adaptor sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor
sequence: 5' CTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT" 3'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 15-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae; PACCAD calde, Panicoideae, Andropogoneae, Zea.

1 (bases 1 to 60)
Genoplante.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence has been generated in the framework of the french plant genomics programme 'Genoplante' (http://www.genoplante.com and http://genoplante-info.infobiogen.fr).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genoplante, a major partnership french program in plant genomics Unpublished (2003)
Contact: Genoplante
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 55.7%; Score 20.6; DB 1; Length 60; Best Local Similarity 48.1%; Pred. No. 2.7e+05; Matches 13; Conservative 10; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93, rue Henri Rochefort 91025 EVRY CEDEX France
Tel: 33 1 69 47 54 00
Fax: 33 1 69 47 54 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60 bp mRNA line
SBF 142 GeneTag2 Zea mays cDNA, mRNA sequence.
CD952940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 51.9%; Pred. No. 2.7e+05;
Matches 14; Conservative 9; Mismatches 4;
MGI:654340
Seq primer: -28ml3 revl ET from Amersham.
Location/Qualifiers
                                                                                                  /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |:|| ||:||: || | |::::::||| 39 GTCCTCCTAGCTAGAGACCCTGGG 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24 GGCTCCACCTCCCCGCCACCGTTG 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNUG 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GUCCACCUCCUCGCGGUNNNNNUGGG 29
                                                                                                                                                                         /db_xref="taxon:10090"
/clone="IMAGE:1228748"
/sex="females"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:4577"
/clone_lib="GeneTag2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Zea mays"
/mol_type="mRNA"
/cultivar="mixture"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CD952940.1 GI:32800704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genoplante
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST
```

DEFINITION ACCESSION VERSION KEYWORDS SOURCE

RESULT 13 CD952940 LOCUS

셤

ORIGIN

ORGANISM

REFERENCE AUTHORS TITLE JOURNAL COMMENT

FEATURES

ORIGIN

ઠે 셤

ö

Gaps

```
/organism="Oryza minuta"
/mol_type="mRNA"
/db_xref="taxon:63629"
/dev_stage="4-weks after germination"
/dow_stage="4-weks after germination"
/clone lib="Oryza minuture HybriZAP-2.1 XR library"
/note="Organ: immature leaf"
/note="Organ: immature lea
```

q

Search completed: March 15, 2005, 20:38:12 Job time : 1492.44 secs

THE STVIK (USPTO)

1

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

odel	<pre>March 15, 2005, 06:19:02 ; Search time 726.693 Seconds    (without alignments) 2467.126 Million cell updates/sec</pre>	
3	0:0	
9	6:1	
ısin		3-63
ج د	2005	1667E
searc	15,	-669-
OM nucleic - nucleic search, using sw model	March	US-09-699-667E-63
Ü		
OM nuclei	Run on:	Title:
-		_

Perfect score: 37 Sequence: 17 Sequence: 1 ggguccaccucgcggunnnnnugggcaugcgcc 37 Scoring table: IDENTITY NICDX

Scoring table: IDENTITY\_NUCDX
Gapop 10.0 , Gapext 1.0
Searched: 4708233 seqs, 24227607955 residues

Total number of hits satisfying chosen parameters: 9416466 Minimum DB seq length: 0

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : GenEmbl:\*

1: 90-ba:\*
2: 90-btq:\*
3: 90-in:\*
4: 90-om:\*
5: 90-om:\*
7: 90-ph:\*
9: 90-ph:\*
10: 90-pr:\*
11: 90-po:\*
13: 90-un:\*
14: 90-un:\*

ap kings U

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	AX012291 Sequence	AX012282 Sequence	AX012283 Sequence	AX012285 Sequence	AX012286 Sequence	AX012287 Sequence	AX012288 Sequence	AX012289 Sequence	AX012290 Sequence	AX012284 Sequence	AR021007 Sequence	AR021047 Sequence	AR043422 Sequence	AR043462 Sequence	AR062337 Sequence	AR062377 Sequence	AR183796 Sequence	AR183836 Sequence	AR368179 Sequence
	ID	AX012291	AX012282	AX012283	AX012285	AX012286	AX012287	AX012288	AX012289	AX012290	AX012284	AR021007	AR021047	AR043422	AR043462	AR062337	AR062377	AR183796	AR183836	AR368179
	DB	9	9	9	9	9	9	9	9	9	9	ø	ø	9	9	ø	9	9	9	9
	Query Match Length DB	37	57	57	57	57	57	57	57	57	57	52	52	52	52	52	52	52	52	25
ه و	Query	95.7	95.7	95.7	95.7	95.7	95.7	95.7	95.7	95.7	91.9	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
	Score	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	34	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
;	Result No.	-	7	e	4	S	9	7	80	6	10	11	12	13	14	15	16	17	18	19

AR368219 Sequence	CQ759677 Sequence	I41388 Sequence 16	AR123021 Sequence	I41385 Sequence 13	I41386 Sequence 14	I41378 Sequence 6		AR243300 Seguence	AR342596 Seguence	AR342597 Sequence		AX174839 Seguence	AR363756 Sequence	A41844 Seguence 25	A41849 Sequence 30	AB119049 Hepatitis	AB119037 Hepatitis	AB119032 Hepatitis						AB119045 Hepatitis	AB119046 Hepatitis	
AR368219	CQ759677	141388	AR123021	I41385	141386	141378	BD226817	AR243300	AR342596	AR342597	AX174838	AX174839	AR363756	A41844	A41849	4 AB119049	4 AB119037	-	4 AB119033	4 AB119036	4 AB119041	4 AB119042	4 AB119044	4 AB119045	4 AB119046	
9	ø	9	9	9	ø			9		9	9	9	ø	9	ø	7	-	•	14		Н	-	7	7	1,	
52	57	80	83	84	84	86	90	90	90	90	90	90	101	105	105	522	523	524	524	524	524	524	524	524	524	
2.2	2.5	7.	2.5	. 2	~		~	~	7	2.2	. 2	7	~	. 2	82.2	~	2.2	~	2.2		~	~	. 2	. 2	. 2	
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
4.0	4.0	30.4	30.4	30.4	0.4	0.4	30.4	0.4	0.4	30.4	0.4	4.0	0.4	0.4	4.0	30.4	4.0	4.0	30.4	4.0	30.4	30.4	4.0	30.4	0.4	
m	m	m	m	m	m	m	m	m	ų	m	m	m	m	m	'n	m	m	m	m	m	'n	m	m	ų	m	
20	21	22	23	24	25	56	27	28	53	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
										υ		O		υ	O	U	υ	U	υ	υ	U	υ	υ	υ	U	

## ALIGNMENTS

NA linear  erreault, J.P.  B. i. Length 37;  id"  id"  j; Indels  GCC 37  H   GCC 37  GCC 37  AB Iinear	PAT 06-SEP-2000	PERREAULT JEAN	0; Gaps 0;	PAT 06-SEP-2000
6. RN. ond Pe vage vage vage vage vage vage vage vag	linear	rreault,J.P. E DANIEL (CA); ;	; 1, 37	linear
37 bp 37 bp 3852  1352  11 ficial seque fontaine, D. a for rna clea for rna fo	. 9	construct construct construct tences; artificial sequences. ch, S., Lafontaine, D. and Perre id enzyme for rna cleavage 0.995566-A 53 04-NOV-1999; cr SIRINARR (CA); LAFONTAINE D. location/Qualifiers N.; UNIV SHERBKOOKE (CA) organism="synthetic construct" mol_type="unassigned RNA" db_xref="taxon:32630" note="synthetic nucleic acid"	15.4; lo. 3.5 latches legcaud	57 bp W09955856.
AX012291 Sequence 53 from Patent W09955856. AX012291.1 GI:9998352 synthetic construct synthetic construct other sequences; artificial sequence. In an artificial sequence. Ananvoranich, S., Lafontaine, D. and P. Nucleic acid enzyme for rina cleavage butch: W0 9958856-A 53 04-NOV-1999; ANANVORANICH SIRINART (CA); LAFONTAI) PIERRE (CA); LAFONTAI) PIERRE (CA); LAFONTAI) FIGATION SHERBROOKE (CA)  ANANVORANICH SIRINART (CA); LAFONTAI) FIGATION OQUALIFIERS  ANANVORANICH SIRINART (CA); LAFONTAI)  ANANVORANICH SIRINART (CA); LAFONTAI)  ANANVORANICH SIRINART (CA); LAFONTAI)  ANANCORANICH SIRINART (CA); LAFONTAI)  ANANORANICH SIRINART (CA); LAFONTAI  BERTER (CA); LAFONTAI  ANANORANICH SIRINART (CA); LAFONTAI  ANANORANICH SIRINART (CA); LAFONTAI  BERTER (CA); LAFONTAI  ANANORANICH SIRINART (CA); LAFONTAI  ANANORATICH SIRINART (CA); LAFONTAI  BERTER (CA); LAFONTAI  ANANORATICH SIRINART (CA); LAFONTAI  ANANORATICH SIRINART (CA); LAFONTAI  ANANTAI SIRINART (CA); LAFON	m	ic construct ic construct equences; artifi- anich,S., Lafont acid enzyme for WO 9958856-A 5; WICH SIRINART Location/Quali 1. 37 /organiam="8yy /mol_type="unm /db_xref="taxx	95.7%; 64.9%; 1 1servative 12. AccuccucgccGUN	4 88
a 1,4		a)	tch al Similar 24; Cor 1 GGGUCC 	
RESULT 1 AX012291 LOCUS ACCESSION A VERSION A VERSION A VERSION A VERSION A ACCESSION A ACCESSION A ACCESSION A ACTHORS S COURCE COURNAL A ACTHORS A TITLE N TITLE N TOURNAL A ACTHORS A COURT MATCH Best Local MATCHES COURT A ACTHORS S ACCESSION A ACCESSION A KEYWORDS SOURCE S ACCESSION A KEYWORDS SOURCE S ACCESSION A KEYWORDS SOURCE S	RESULT 1 AX012291 LOCUS DEFINITION ACCESSION VERSION	KEYWOKUS NOGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES SOUTCO	Query Ma Best Loc Matches Qy Db	RESULT 2 AX01282 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

```
1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                               Sequence 48 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 49 from Patent WO9955856. AX012287
location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                   AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 64.5.,
Best Local 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                  Bource
                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                      RESULT 5
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Barent: WO 9955856-A 47 04-NOV-1999;
ANANVORANICH SIRINRT (CA); LAGONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Parent: W0 995586-A 45 04-NOV-1999;
ANANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                              Nucleic acid enzyme for rna cleavage
Barent: WO 995886-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95.7%; Score 35.4; DB 6; Length 57; 64.9%; Pred. No. 3.3; ive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                       Length 57;
                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                               Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                        1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGCATGCGGC 37
                                                                                                                                                                                                                                          ..
                                                                                                                           1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .57
/organism="synthetic construct"
/wol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                       95.7%; Score 35.4; DB 64.9%; Pred. No. 3.3; tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                           57 bp
Sequence 45 from Patent WO9955856.
AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX012285 57 bp
Sequence 47 from Patent WO9955856.
AX012285
                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24; Conservative
                                                                                                                                                                                                                                                                      24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 24; Conserval
                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                      Matches
                               AUTHORS
              REFERENCE
                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
AX012283
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

g

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-NOV-1999;

RANANVORANICH SIRINART (CA). LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CA); PERREAULT JEAN
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                6; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95.7%; Score 35.4; DB 6; Length 57;
64.9%; Pred. No. 3.3;
iive 12; Mismatches 1; Indels
                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P. Nucleic acid enzyme for rna cleavage Patent: WO 9958856-A 48 04-NOV-1999; ANANVORANIC SIRINART (CA); LAFONTAINE DANIEL (CA PIERRE (CA); LOCATION/QUALIFIERS
                                                                                                                                                                                                                                                                                     1 GGGTCCACCTCCTCGCGGTCCGCCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 geguccaccuccucecegunininingegecauececc 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGTCCACCTCCTCGCGGTCCGGCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCGCC 37
1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:12630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                             Query Match

95.7%; Score 35.4; DB

Best Local Similarity 64.9%; Pred. No. 3.3;

Matches 24; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences.
```

Query Match Best Local S

tches

a

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

TITLE JOURNAL

PEATURES

ORIGIN

REFERENCE AUTHORS

DEFINITION

RESULT 7 AX012288 LOCUS

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 05-DEC-1998
                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 52 04-NOV-1999;
ANANVORANICH SIRINART (S.) LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 955856-A 46 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROCKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95.7%; Score 35.4; DB 6; Length 57; 64.9%; Pred. No. 3.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 91.9%; Score 34; DB 6; Length 57; Best Local Similarity 64.7%; Pred. No. 10; Marches 22; Conservative 12; Mismatches 0; Indels
                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
1 GGGTCCACCTCCTCGCGGTCCGAGCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٠,
٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGTCCACCTCGCGGTCCGATCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                               1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            other sequences; artificial sequences.
                                                                                                                                                                                                                   other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR021007 52 bp 1
Sequence 40 from patent US 5789245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57 bp
Sequence 46 from Patent WO9955856.
AX012284
AX012284.1 GI:9998345
                                                                                        AX012290 Sequence 52 from Patent WO9955856.
                                                                                                                                               AX012290.1 GI:9998351
                                                                                                                                                                                     synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                    synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                         DEFINITION
                                                                                                                                                                                                                                                         AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
JOURNAL
                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
AR021007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
                                                                       AX012290
LOCUS
                                                        RESULT 9
                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                        ö
                                                                                                                                                                                                                     PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: WO 9955856-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 51 04-NOV-1999;
ANANVORANICH SIRINARR (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95.7%; Score 35.4; DB 6; Length 57; 64.9%; Pred. No. 3.3; ive 12; Mismatches 1; Indels
                    Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 57
                                                                                                                                                                                                                         linear
                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                             1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGTCCACCTCCTCGCGGTCCGAACTGGGCATGCGGC 37
                      DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="caxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="synthetic nucleic acid"
                                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95.7%; Score 35.4; DB 64.9%; Pred. No. 3.3;
                                                                                                                                                                                                                                                                                                                                                 other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         other sequences; artificial sequences.
                    ; Score 35.4; Di
; Pred. No. 3.3;
12; Mismatches
                                                                                                                                                                                                                     AX012288 57 bp
Sequence 50 from Patent WO9955856.
AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012289 57 bp
Sequence 51 from Patent WO9955856.
AX012289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                           AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX012289.1 GI:9998350
                    95.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24; Conservative
                                   Similarity 64.9
24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 24; Conserv
```

DEFINITION ACCESSION VERSION

KEYWORDS

RESULT 8 AX012289 LOCUS

ઠે 요 ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL

PEATURES

Matches

ORIGIN

Gaps

ö

PAT 29-SEP-1999

```
1 (bases 1 to 52)
Dubensky,T.W. Jr., Polo,J.M., Ibanez,C.E., Chang,S.M.W., Jolly,D.J., Driver,D.A. and Belli,B.A.
Alphavirus vector constructs
Patent: US 5843723-A 40 01-DEC-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 5814482-A 80 29-SEP-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82.2%; Score 30.4; DB 6; Length 52; 59.4%; Pred. No. 2.1e+02; tive 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 52;
                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 82.2%; Score 30.4; DB 6; Best Local Similarity 59.4%; Pred. No. 2.1e+02; Matches 19; Conservative 12; Mismatches 1;
                                       82.2%; Score 30.4; DB 6; 59.4%; Pred. No. 2.1e+02; iive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                 4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52 bp 1
Sequence 40 from patent US 5843723.
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="unknown"
/mol_type="unassigned DNA"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                       Sequence 80 from patent US 5814482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search completed: March 15, 2005, 12:35:01 Job time: 727.693 secs
                                                                                                                                                                                                       25
                                                                                                                                                                                                                                    AR043462
AR043462.1 GI:5964470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR062337.1 GI:5990028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19; Conservative
                                                                       19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 1. .52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                             Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassified.
                                                         Similarity
                                                                                                                                                                                                         AR043462
                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                          Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
AR062337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                        AR043462
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unclassified.

Unclassified.

(bases 1 to 52)

Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J.
and Driver, D.A.
Aphavirus structural protein expression cassettes
Patent: US 5789245-A 80 04-AUG-1998;
Location/Qualifiers
                                                                                   1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Ibanez, C.E., Chang, S.M.W., Jolly, D.J. and Driver, D.A.
and Driver, D.A.
Alphavirus structural protein expression cassettes
Patent: US 5789245-A 40 04-AUG-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                              PAT 05-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 52)
Dubensky, T.W. Jr., Polo, J.M., Jolly, D.J. and Driver, D.A.
Eukaryotic layered vector initiation systems
Patent: US 581482-A 40 29-SEP-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 52;
                                                                                                                                                                                                                                                    Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82.2%; Score 30.4; DB 6;
59.4%; Pred. No. 2.1e+02;
tive 12; Mismatches 1;
                                                                                                                                                                                                                                                  82.2%; Score 30.4; DB 6; 59.4%; Pred. No. 2.1e+02; tive 12; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 80 from patent US 5789245. AR021047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                          /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40 from patent US 5814482.
AR043422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="unknown"
               AR021007.1 GI:3975622
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR021047.1 GI:3975662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR043422.1 GI:5964430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 59.4%;
                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.4%
Matches 19, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
Unclassified.
                                                                         Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR043422
                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                           Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
AR043422
LOCUS
DECINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                             Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                               JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
AR021047
LOCUS
CCESSION
             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                 TITLE
                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
```

ð

셤

ö

Gaps

ö

PAT 29-SEP-1999

ö

Gaps

..

THIS PAGE BLANK (uspro,

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

	Seco
	204.798
	time
	Search
model	•-
딭	:51
3	01:00:51
using	01
	2005,
'n,	200
веаrch,	March 15, 2
	<u>بر</u>
eic	arc
ucleic	Σ
1	
ij	
nucleic	ä
nuc	: uo
δ	Run

March 15, 2005, 01:00:51; Search time 204.798 Seconds (without alignments) 1069.494 Million cell updates/sec US-09-699-667E-63 37 Title: Perfect score: Sequence:

1 ggguccaccuccucgcggunnnnnugggcaugcgcc 37 IDENTITY NUCDX Gapop 10.0 , Gapext 1.0 Scoring table:

8780412 Total number of hits satisfying chosen parameters: 4390206 segs, 2959870667 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Database :

geneseqn2003cs:\* geneseqn2003ds:\* geneseqn2004as:\* geneseqn2004bs:\* geneseqn1990s:\*
geneseqn2000s:\*
geneseqn2001s:\*
geneseqn2001as:\*
geneseqn2001as:\*
geneseqn2002as:\*
geneseqn2003as:\* N\_Geneseq\_16Dec04:\* 1: geneseqn1980s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		عان			SUMMARIES	
Result No.	Score	Query Match	Query Match Length DB	DB	ID	Description
-	37	100.0	37		AAZ57639	Aaz57639 Nucleotid
7	35.4	95.7	57	e	AAZ57636	Aaz57636 Trans-act
m	35.4	95.7	57	٣	AAZ57637	Aaz57637 Trans-act
4	34	91.9	57	m	AAZ57638	Aaz57638 Trans-act
S	30.4	82.2	48	13	ADR47040	Adr47040 Dengue vi
9	30.4	82.2	48	13	ADT48965	Adt48965 PCR prime
7	30.4	82.2	51	N	AAQ86173	Aag86173 Primer HD
æ	30.4	82.2	52	7	AAQ86204	Aaq86204 Sindbis/H
σ	30.4	82.2	52	N	AAT31151	Aat31151 HDV rever
10	30.4	82.2	52	N	AAT30817	Aat30817 HDV riboz
11	30.4	82.2	52	~	AAV42394	Aav42394 Nested PC
12	30.4	82.2	52	0	AAV42426	Aav42426 Forward P
13	30.4	82.2	52	N	AAV60154	Aav60154 Nested PC
14	30.4	82.2	52	0	AAV60185	Aav60185 Reverse P
15	30.4	82.2	52	7	AAV70746	Aav70746 Reverse P
16	30.4	82.2	52	7	AAV70714	Aav70714 Nested pr
17	30.4	82.2	52	М	AAZ92930	Aaz92930 Hepatitis
18	30.4	82.2	52	m	AAZ92970	Aaz92970 Hepatitis
19	30.4	82.2	52	М	AAZ92843	Aaz92843 Hepatitis
50	30.4	82.2	52	М	AAZ92803	Aaz92803 Hepatitis

Aa138850 Alphaviru Abk6276 HbV antig Abk6316 Heparitis Adi3033 Heparitis Adi30423 Heparitis Ado13942 Eukaryoti Ado13948 Substrate Aagi3138 Substrate Aagi3138 Substrate Aagi3140 Substrate Aagi665 Self-Clea Aagi6665 Self-Clea Aayi6665 Self-Clea Aayi6665 Self-Clea Aayi6663 Self-Clea	Adp96249 HEP rabie Abz82121 Hepatitis Aan82174 Clone del Adh10576 Nucleotid Aan82172 cDNA corr Abz77701 Nucleotid
AAL38850 AAL38810 AAK46316 ABK46516 AD130423 AD130423 AD013942 AD013942 AAC53138 AAC53140 AAF28121 AAC46665 AAQ46665 AAAX76586 AAX76586	ADP96249 ABZ82121 AAN82174 ADH10576 AAN82172 ABZ77701
99998888899722222	94 12 99 8 567 1 1679 1 1688 8
22222222222222222222222222222222222222	888 825.25.2 825.25.25 88.85.25
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	3000 3000 4.4.4.4.4.4.
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 4 4 4 4 4 4 6 7 6 7 6 4 6 6 7 6 6 7

## ALIGNMENTS

RESULT 1 AAZ57639 ID AAZ57639 standard; RNA;	ard: RNA: 37 BP.
AAZ57639;	
05-APR-2000 (	(first entry)
Nucleotide seq	sequence of bimolecular ribozyme RzA fragment.
Bimolecular ribozyme; inherited disease; ss	Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; ss.
Synthetic.	
Key	Location/Qualifiers
misc_binding	
	<pre>/*tag= a /bound_moiety= "RzB fragment of bimolecular ribozyme" /note="Forms double-stranded region with bases 20-16 seminer ASA57640"</pre>
stem_loop	719 /***ar= h
misc_binding	10
	E = 0
misc_binding	30, 37 /*tag= d
	E,= 9
WO9955856-A2.	
04-NOV-1999.	
29-APR-1999;	99WO-CA000391.
29-APR-1998;	98CA-02230203.
S VINU ( HSYU)	SHERBROOKE.

(UYSH ) UNIV SHERBROOKE

Lafontaine

```
This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to an ucleic acid enzyme (e.g. delteRzPl.1) that is constructed to have a substrate binding portion with the following sequence 3.-UNNXNN-5. The substrate of the enzyme has the sequence 5'-H'*GNNINN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site of sequence by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= d
52. 57
/*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /bound moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
30. .45
                                                                  New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antigenomic delta ribozyme; viral RNA cleavage;
                                                                                                                                                                                                                                                                                                                                                                          ; Score 37; DB 3; Length 37; Pred. No. 0.045; 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                              Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trans-acting antigenomic delta ribo
inherited disease; deltaRzPl.1; ss.
                                                                                                               Example 5; Fig 4; 52pp; English.
            Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                         31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20. .25
/*tag= c
/bound_mc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ57636 standard; RNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                        WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
misc_binding
            Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ57636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                      8
```

```
Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                        This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site of the substrate (cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate.
                                                                                                                                                                                                                                                                                           nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= d
52..57
/*tag= "Porms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *tag= c bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11" 10^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                   enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                  57;
                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                95.7%; Score 35.4; DB 3; Length 81.1%; Pred. No. 0.18; ive 6; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                      Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGCGCC 37
                           Lafontaine D;
                                                                                    New construction of nucleic acid enzyme diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                               Example 1; Fig 1A; 52pp; English.
                           Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ57637 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Д
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 81.1
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= 1
20. .25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l. .6
/*tag=
/note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .19
                                                        WPI; 2000-096791/08
                             Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

ö

ö

Gaps

Lafontaine D;

```
This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. the invention relates to a nucleic acid enzyme (e.g. the following sequence 3'-UNNXNN-5'. The substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNRNN-3'. The binding portion of the enzyme (ribozyme) hase pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage viral RNA or RNA causing for example an inherited disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cytostatic; virucide; dengue virus; recombinant replicon; deletion; d protein; C protein; NS1 protein signal; vaccine; cervical cancer; al disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          enzymes also have other therapeutic, biotechnological and diagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                 New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
91.9%; Score 34; DB 3; Length 57;
Best Local Similarity 82.4%; Pred. No. 0.57;
Matches 28; Conservative 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SHANGHAI TENGEN BIOMEDICAL CO LTD.
TENGEN BIOMEDICAL CO.
BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                           Example 1; Fig 2; 52pp; English
                                                                                                                                     Ananvoranich S,
                    99WO-CA000391
                                                         98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           preM protein, C protein, NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JAN-2004; 2004WO-CN000088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JAN-2003; 2003CN-00115272
30-JAN-2003; 2003CN-00115273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADR47040 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-NOV-2004 (first entry)
                                                                                              UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human papillomavirus
                                                                                                                                                                          WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2004072274-A1.
                                                                                                                                     Perreault J,
                  29-APR-1999;
                                                         29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADR47040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SHAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BEIJ-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
ADR47040
ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                cleaves substrate SP1.2 (see AAZ37634). The uncation relates to a nucleic acid enzyme (e.g. deltaAZ91.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*CNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the deltaRzPl.1 sequence (AAZ57636) shown in figure 1
                                                                                                                                                                                                                                  deltaRzP1.2. This ribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .6
/*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20. .25
/*tag= c
/bound_moiety= "SP1.1 gubstrate bases (AAZ57641) 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                                                                                                                   New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95.7%; Score 35.4; DB 3; Length 57; 81.1%; Pred. No. 0.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antigenomic delta ribozyme; viral RNA cleavage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGUCCACCUCCUCGCGGUCCCAGCUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNUGGGCAUGCGCC 37
                                                         Perreault J, Ananvoranich S, Lafontaine D;
                                                                                                                                                                                                                                    This is the nucleotide sequence of ribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                             Example 1; Page; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57638 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= <
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52. .57
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . . 45
                (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                '. .19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-acting antigenom
inherited disease; ss.
                                                                                          WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
```

셤 8

ô

Gaps

```
equence for prew protein of denges wires and also includes elements of e.g. the non-coding region in the whole of the 5'-and, the coding region of the front 20 amino acids in the Cprotein, and the coding region of the front 20 amino acids in the Cprotein, and the coding region of NSI protein signal; coding regions of all non-structural proteins. The catained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can efficiently express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthaning the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a gene-expressing system using of the full-length dengue virus coNA clone (pRS/FLD2). The recombinant virus vectors were transfected into baby changes trained (BHK-21 Tet-off cell lines. This sequence corresponds to an oligonucleotide used in the cerombinant replicon of the invention.
                                                   Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors like cervical cancer and viral diseases.
                                                                                                                                                                       A dengue virus recombinant replicon has a deletion of the complete coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Virucide, Japanese encephalitis B virus; bivalent vaccine, hepatitis B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82.2%; Score 30.4; DB 13; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TENGEN BIOMEDICAL CO.
BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD
                                                                                                                                 Example 4; SEQ ID NO 37; 38pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sed id 29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADT48965 standard; DNA; 48 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-MAR-2003; 2003CN-00115912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2004-699719/68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCR primer 5' HDVr,
               WPI; 2004-625870/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCR; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2004082712-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-SEP-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADT48965;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BEIJ-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TENG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The maplified DNA sequences were used in the construction of a cukaryotic layered vector initiation system (ELVIS) derived from Sindbis. ELVIS's comprise a 5 sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral
                                                 The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for
                                                                                                                                                                producible at low cost and have high immunoefficiency, in which the recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuated encephalitis B virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                       recombination and capable of retaining its self-replication function. virus is useful in producing the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                       DB 13; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Driver DA,
                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                 Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chang SM, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                      17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                   82.2%; Score 30.4; D
59.4%; Pred. No. 11;
ive 12; Mismatches
               Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 2; Page 68; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93US-00122791.
94US-00198450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-US010469.
                                                                                                                                                                                                                                                example from the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                       Local Similarity 59.4
les 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1995-131362/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAQ86173;
                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ86173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         xxxyyyyyyxx
                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

8888888

ઠે 요

```
4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                         셤
                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequences given in AAQ86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are eukaryotic layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS's comprise a 5's sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevents transcription of the variety of the viral such such set this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                              Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polo JM;
                                                                                                                         ö
                                                                                             82.2%; Score 30.4; DB 2; Length 51; 59.4%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jolly DJ, Driver DA,
                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                        Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                  Seguence 51 BP; 9 A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                         12, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chang SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93US-00122791
94US-00198450
                                                                                                                                                                                                                                            AAQ86204 standard; DNA; 52
                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                         Local Similarity 59.4
1es 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ibanez CE,
                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9507994-A2
                                                                                                                                                                                                                                                                                                 25-MAR-2003
23-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                        AAQ86204;
                                                                                              Query Match
                                                                                                                         Matches
```

```
primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 839-887. It was used with reverse primer HDV49-XC (AAT30850) for the PCR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SIN276-SPE (AAT31153), is used to amplify a fragment contg. Sindbis 5'-end sequences fused to HDV sequences. Overlapping synthesis is used in a second round of PCR using primers HDV49-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV tibozyme/Sindbis 5'-end 299 nts/Sindbis junction region/Sindbis structural protein genes/Sindbis 3'-end untranslated region, designated pd5'-26s. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                Alphavirus; Sindbis virus; vector; gene therapy; vaccine; polymerase chain reaction; PCR; primer; hepatitis delta virus; HDV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 82.2%; Score 30.4; DB 2; Length 52; Local Similarity 59.4%; Pred. No. 11; local Similarity 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chang SMW,
1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 uccaccuccuceceeunnmmueeecauece 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 7; Page 120; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky TW, Polo JM, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94US-00348472
                                                                                                                                                                                                                                                                                                                                             HDV reverse primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT30817 standard; DNA; 52
                                                                                                                                                                     AAT31151 standard; DNA; 52
                                                                                                                                                                                                                                                                                    12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ribozyme; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9617072-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .9661-NUL-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                           AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT30817;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT30817
ID AAT3
XX
AC AAT3
```

ö

ö

Gaps

ö

82.2%; Score 30.4; DB 2; Length 52; 59.4%; Pred. No. 11; tive 12; Mismatches 1; Indels

Best Local Similarity 59.49 Matches 19; Conservative

Query Match

Ĕ

Synthetic.

Belli BÅ;

```
pCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA alpha: virus structural protein expression cassettes - for producing

    for producing

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polo JM;
                                                                                                                                               Polo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                               ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                               Driver
                                                                                                                                                                                                                    DNA alpha:virus structural protein expression cassettes recombinant alpha:virus particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 82.2%; Score 30.4; DB 2; Length Local Similarity 59.4%; Pred. No. 11; Los 19; Conservative 12; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                             Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                               Jolly DJ,
                                                                                                                                                                                                                                                                          Example 3; Col 69; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-00741881.
                                                                        95US-00404796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Forward PCR primer HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV42426 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                               Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMW, Ibanez CE,
                                                                                                                                                                               WPI; 1998-446089/38.
                                                                                                           (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-446089/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CHIR ) CHIRON
15-SEP-1993;
18-FEB-1994;
30-NOV-1994;
20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .8-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US5789245-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV42426
   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Primer SHDVIF (AAT30816) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDV17-68 (AAT30817) and reverse primer SHDV84R (AAT30818) to generate an HDV 11bozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                      Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                        Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer; polymerase chain reaction; PCR; ELVIS; ribozyme; HDV; hepatitis delta virus; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                     Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nested PCR primer HDV17-68 of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82.2%; Score 30.4; 59.4%; Pred. No. 11
                                                                                                                                                                                                                                                                                                                                                                                                     Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 3; Page 85; 256pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВЪ.
                                                                                                                                                                                                                                                                                         94US-00348472.
95US-00376184.
95US-00405827.
                                       HDV ribozyme primer HDV17-68.
                                                                                                                                                                                                                                                         95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-00741881
                                                                                                                                                                                                                                                                                                                                                                 CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22
   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 59.4 nes 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV42394 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                     Dubensky TW, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1996-277785/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-OCT-1996;
                                                                                                                                                                                                                                                                                          30-NOV-1994;
18-JAN-1995;
                                                                                                                                                                                  WO9617072-A2
                                                                                                                                                                                                                                                         30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                15-MAR-1995;
   12-SEP-1996
                                                                                                                                                                                                                      06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US5789245-A
```

Synthetic

AAV42394;

Query Match Matches

ò 원

ö

Gaps

```
(revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DUBENSKY T W. JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DRIVER D A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POLO J M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LS-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV60185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (DUBE/) I
(JOLL/) C
(DRIV/) I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POLO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Driver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV60185
  88888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                     PCR primers AAV42167-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression casecte which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotic layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                              Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jolly DJ, Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
82.2%; Score 30.4; E
Best Local Similarity 59.4%; Pred. No. 11;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 3; Col 71-72; 144pp; English.
                                                  Example 7; Col 103; 140pp; English.
recombinant alpha: virus particles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93US-00122791.
94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV60154 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sindbis; PCR primer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DUBENSKY T W.
JOLLY D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepatitis D virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POLO J M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-NOV-1994;
18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-FEB-1994;
14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV60154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (DUBE/)
(JOLL/)
(DRIV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POLO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ANY COLOR PRESULT 13
ANY COLOR PROPERTY NAME OF THE PROPERTY NAME OF THE
£$8$555555555555888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
ö
The specifiaction describes an eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral cDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral cDNA. The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I-restricted or an HLA class II-restricted or an HLA class II-restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              layered vector initiation system; stimulate; immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCR primers AAV60184-85 are used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5. of viral cDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral cDNA.
                                                                                                                                                                                                                                                                                                                                          Gape
                                                                                                                                                                                                                                                                                                                                        .
0
                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                              82.2%; Score 30.4; DB 2; Length 59.4%; Pred. No. 11;
                                                                                                                                                                                                                                                           Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                      12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dubensky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 5; Col 108; 144pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93US-00122791.
94US-00198450.
94WO-US010469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Reverse PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV60185 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sindbis; PCR primer; ss
```

```
ö
The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response within an animal. The system is useful for stimulating an immune response to an infection in vivo, especially where the immune response to an infection in vivo, especially where the immune response is a cell mediated, HIA class I restricted or an HIA class II-restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alphavirus vectors constructs containing a 5' promoter of viral cDNA by in vitro transcription - used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Driver DA;
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reverse PCR primer HDV17-68 used to amplify Hepatitis delta virus.
                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alphavirus vector construct; gene therapy; PCR primer; ss
                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                           Seguence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Belli BA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                       12; Mismatches
                                                                                                                                                                                                                                                                                                           Score 30.4; I
Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jolly DJ, Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 7; Col 103; 140pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                 82.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96US-00739167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
(first entry)
                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.4<sup>§</sup>
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV70746 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-044581/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-SEP-1993;
18-FEB-1994;
30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-MAR-2003
02-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US5843723-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chang SMW,
Polo JM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV70746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV70746

110

AAV7

AAV
           888888888
                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
```

PCR primers AAV70745-46 are used to amplify part of the hepatitis delta virus (HDV) genome. The amplified product is used in the production of the alphavirus vector constructs of the invention. These constructs comprise a promoter 5' of viral cDNA which initiates the synthesis of RNA from the viral cDNA by in vitro transcription, followed by a 5' sequence sequence encoding alphavirus nonstructural proteins, a viral junction region which has been inactivated such that viral transcription of a subgenomic fragment is prevented, an internal ribosome entry site or a sequence which promotes ribosome read through between adjacent reading frames, and an alphavirus RNA polymerase recognition sequence. The 20-MAR-2003 to correct PR field.)

```
Gaps
                                                           ö
                                   52;
                                                           1; Indels
                                  DB 2; Length
          Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                   4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                           12; Mismatches
                                  82.2%; Score 30.4;
59.4%; Pred. No. 11;
                                                                                                                                                  Search completed: March 15, 2005, 11:20:13
Job time : 204.798 secs
                                                            Conservative
                                              Local Similarity
                                                          19;
                                     Query Match
                                                            Matches
ž S
                                                                                       ò
                                                                                                           g
```

us-09-699-667e-63.std.rni

```
4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40, Appl
Sequence 80, Appl
Sequence 40, Appl
Sequence 40, Appl
Sequence 10, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 12, Appl
Sequence 13, Appl
                                                                       March 15, 2005, 10:18:52 ; Search time 61.3421 Seconds
    (without alignments)
    986.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                              2405568
                                                                                                                                                                                                                                                                                                                                                          Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*
(cgn2_6/ptodata/1/ina/5B_COMB.seq:*
(cgn2_6/ptodata/1/ina/6A_COMB.seq:*
(cgn2_6/ptodata/1/ina/6B_COMB.seq:*
(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                                                                                                                                                     1 ggguccaccucgcggunnnnnugggcaugcgcc 37
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-741-881-40
US-08-741-881-80
US-08-739-158-80
US-08-739-158-80
US-08-739-167-40
US-08-739-167-80
US-08-931-869-80
US-08-931-869-80
US-08-931-869-80
US-09-350-399-80
US-09-350-399-80
US-09-350-399-80
US-09-350-399-80
US-08-238-963A-16
US-08-238-963A-14
US-09-333-042-12
                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-553-619B-25
US-08-553-619B-30
                                                                                                                                                                                                                  1202784 seqs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                 - nucleic search, using sw model
                                                                                                                                                                            IDENTITY NUCDX Gapop 10.0 , Gapext 1.0
                                                                                                                    US-09-699-667E-63
                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                                                                          ........
                                                                                                                          Title:
Perfect score:
Sequence:
                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic
                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                  Searched:
                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Result
No.
```

Appli Appli Appli Appli Appli Appl Appl			0 ;
117, 17, 17, 17, 17, 17, 17, 17, 17, 17,		w	Gарв
		SYSTEMS	0;0
sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq			52;
ល់លំលំលំលំលំលំលំលំលំលំលំលំលំលំលំលំលំលំល		ATIO	Length Indels
		INITIATION ue	
11 7 7 7 11 11 11 11 11 11 11 11 11 12 13 15 13			11;
US-09-554-337-4 US-08-646-695-1 US-08-646-695-1 PCT-US-66-6653-7 US-09-554-337-1 US-09-554-337-1 US-09-415-784-39 US-09-415-784-39 US-09-415-786-39 US-09-415-786-39 US-09-415-786-39 US-09-215-300-39 US-09-207-362-39 US-09-202-540-115 US-09-202-540-115 US-09-202-540-628	TS	ReD VECT	, DB 1.2; nes
844666000000000000000000000000000000000	ALIGNMENT	YERED , Vers 81 423C6	re 30.4; d. No. 4.2 Mismatches
00001100000000000000000000000000000000	ALIG	1881 1881 1. LAYE 1. LAYE 2. 701 2. 701 41,881	Score Pred. 3
		TI III III III III III III III III III	7
4 6 6 6 6 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		JS/087 JS/087 Tho Tho Tho Jaas J Jaas J Jaas J Jaas J Jaas J J J J J J J J J J J J J J J J J J J	4. 4. 4. 4.
8100 14311 14311 14311 1538 15538 15538 56 56 56 56 56 56 56 71 18538 71 18538		1.7 1 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-10 1-741-881-10 1-741-881-10 1-741-881-10 1-741-881-40 1-872-10 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40 1-741-881-40	82.2%; ilarity 59.4%; Conservative
000000004444444rrvv		9plicatic 9245 9410N: Dubensky Polo, JC Ibanez, Chang, S Chang, S Chang, S Estable 100 Columbra REALIE 1300 Columbra 1300 Columb	ity Ber
999998888888888888888888888888888888888	•	T.1  -741-881-40  uence 40, Application ent No. 5789245  MPERAL INFORMATION: APPLICANT: Dubensky J APPLICANT: Dubensky J APPLICANT: Dolo, John APPLICANT: Chang, Ste APPLICANT: Chang, Ste APPLICANT: Dolo, John APPLICANT: Dolo, John APPLICANT: Dolo, John APPLICANT: Dolo, John APPLICANT: Belli, Bar COUNTER: Seattle STREET: 630 Columb STREET: 630 Columb COUNTER: 18 PC COO COUNTER: DATE: 30-OCT CLASSIFICATION NUMBER: FILLING DATE: 30-OCT CLASS	Similarity 9; Conser
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		381-40 40, A) 40, A) 50. 578 32ANT: 3ANT: 3A	ር -
พัพพัพพัพพั		Here 10 Applement	Match Local
00000000000000000000000000000000000000		RESULT 1  US-08-741-881-40  US-08-741-881-40  Sequence 40, Application  Patent No. 5789245  GENERAL INFORMATION:  APPLICANT: Dubensky  APPLICANT: Dubensky  APPLICANT: Dolo, Jod  APPLICANT: Dolo, Jod  APPLICANT: Dolo Sid  APPLICANT: Belli, B	Query M Best Lo Matches
υυυ		UNE-08-1 Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccura Baccu	OM X

```
Washington
                                               98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                    APPLICANT: Polo, John M. APPLICANT: Polo, John M. APPLICANT: Polo, John M. APPLICANT: Dancz, Carlos E. APPLICANT: Ibanez, Carlos E. APPLICANT: Carlos E. APPLICANT: Carlos E. APPLICANT: Driver, David A. APPLICANT: Driver, David A. APPLICANT: Driver, David A. APPLICANT: Bill, Barbara A. TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 40, Application US/08739158

Batent No. 5814482

GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: JOILY, Douglas J.
APPLICANT: Driver Duvers J.
APPLICANT: Driver BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128

CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
OPFRATIS: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
TITNG DATE: 1000 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
82.2%; Score 30.4; Di
Best Local Similarity 59.4%; Pred. No. 4.2;
Matches 19; Conservative 12; Mismatches
                                                                                                                                        Sequence 80, Application US/08741881
Patent No. 5789245
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY:
US-08-741-881-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-739-158-40
                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

ઠે 吕

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION SYSTEMS AND ALPHAVIRUS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCMBARLEN NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C7 / 1146.008
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        930049.423C7 / 1146.008
                                                                                                                                                                                                                                                                                                                 E: SEED and BERRY LLP . 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Score 30.4; D; Pred. No. 4.2; 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 40, Application US/08404796;
Sequence 40, Application US/08404796;
Retent No. 6015686
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Danez, Carlos E.
APPLICANT: Jolly, Douglas J.
APPLICANT: Jolly, Bouglas J.
APPLICANT: Jolly, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYER
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 63100 Columbia Center, 701
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
   Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (206) 022. ...
TELEPHONE: (206) 682-6031
FINFORMATION FOR SEQ ID NO: 80
SEQUENCE CHARACTERISTICS.
LENGTH: 52 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 59.4%;
Matches 19; Conservative 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (206) 622-4900
      Dubensky Jr,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 28104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                             Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98104-7092
                                                                                                                                                                                                                                                                                                                                            STREET: 6300 CC CITY: Seattle STATE: Washingt COUNTRY: US
                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 40, Application US/08739167

Sequence 40, 5843723

GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Lanez, Carlos E.
APPLICANT: Charg, Stephen M.W.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Balli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                        Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: Washington
COUNTRY: Washington
ZIP: 98104-7095
ZOMPUTER READALE FORM:
MEDIUM TYBE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
FI
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                        1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                      12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12; Mismatches
                                                                                                                                                     Query Match

82.2%; Score 30.4;
Best Local Similarity 59.4%; Pred. No. 4.
Matches 19; Conservative 12; Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82.2%; Score 30.4; 59.4%; Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 80, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 59.41
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and E
STREET: 6300 Columbia
rypE: nucleic acid
rype: strandEDNESS: singl
rypeLOGY: linear
US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 5843723
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-739-167-40
```

g

```
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                         Query Match
Best Local Similarity
Matches 19; Conservi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-931-869-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-931-869-40
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:

APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danca, John M.
APPLICANT: Danca, Caphen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Balli, Barbara A.
TITLE OF INVENTION: EUKRAYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: US

CONFUTER: Magnitus -----
COUNTRY: 93104-7092

ZIP: 93104-7092

ZIP: 93104-7092

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
MAME: MCMASters, David
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
**CHARACTERISTICS:
**CH
                        SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAMB: MCMBasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECOMMUNICATION INFORMATION:
TELEPRAM: (206) 622-400
TELEPRAM: (206) 622-400
TELEPRAM: (206) 622-6011
INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS:
LENGTH: 52 Dase pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.2%; Score 30.4; D
59.4%; Pred. No. 4.2;
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 80, Application US/08404796
Patent No. 6015686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 59.44
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                         Gaps
                                                                                                                                                                                                                                                                                   APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Change Stephen M.W.
APPLICANT: O'ally, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: BURKRYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                           .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
  DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: 9819-7092

ZIP: 9819-7092

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: McMasters David D.
REGISTRATION NUMBER: 33,963
FELECOMMUNICATION INFORMATION:
TELEPRONE: (206) 622-4900
TELEPRONE: (206) 622-4900
TELEPRONE: (206) 622-4900
TELEBRANE: (206) 622-6031
INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                    4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                          1 TCCACCTCCTCGGGTCCGACCTGGGCATCCG 32
82.2%; Score 30.4; Di
59.4%; Pred. No. 4.2;
iive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82.2%; Score 30.4; 59.4%; Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 40, Application US/08931869
Patent No. 6015694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 59.48
                                           Conservative
```

us-09-699-667e-63.std.rni

```
APPLICANT: Dubensky Jr. Thomas W
Polo, John M.
Jolly, Douglas J.
Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
CORRESPONDENCES : 18
    SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-Jul-1999
CLASSIFICATION: «Unknown»
ATTONEY AGENT INFORMATION:
ATTONEY AGENT INFORMATION:
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
TELEPHONE: (206) 622-4900
TELEPAX: (206) 622-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/350,399
FILING DATE: 08-011-1999
CLASSIFICATION: <unknown>
ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 93,0049.423D1 / 1146.010
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.2%; Score 30.4; 59.4%; Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 80, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 59.4<sup>†</sup>
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT:
Jolly, Douglas J.
Driver, David A.
TITLE OF INVERTION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                        APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: ENCRAYOFIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSER: SEED and BERRY LLP
STREET: 6100 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER READALLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-WAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMBETE: 15-WAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMBETE: 33,963
REGISTRATION NUMBER: 33,963
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 622-6031
INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARATTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                              SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UCCACCUCCUCGCGGUNNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 30.4;
Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
Dubensky Jr, Thomas W
Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                    STATE: Washington COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                    STREET: 6300 C
CITY: Seattle
                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-931-869-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

ö

Gape

```
US/08/238,963A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 16, Application US/08238963A Patent No. 5625047
Chang, Stephen M.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS: LENGTH: 52 DASE pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C. SOFTWARE: Word Perfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 59.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Word Perfec
CURRENT APPLICATION DATA
APPLICATION NUMBER: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-238-963A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                         ;
                                                                                                                                                                                                                                                                                 APPLICANT DUBENSKY Jr., Thomas W
POLO, John M.
POLO, John M.
Thanez, Carlos E.
Chanez, Carlos E.
Chanez, Carlos E.
Charlos David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSEE: 0PPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
STATE: CALIFORNIA
                  DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
TELEFRAX: (949) 823.5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                    4.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: <UNKNOWID-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82.2%; Score 30.4; D
59.4%; Pred. No. 4.2;
tive 12; Mismatches
                Query Match
82.2%; Score 30.4; L
Best Local Similarity 59.4%; Pred. No. 4.2;
Matches 19; Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 80, Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas
Polo, John M.
Ibanez, Carlos E.
                                                                                                                                                                                                                                  ; Sequence 40, Application US/09236140A; Patent No. 6376236; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 59.49
Matches 19; Conservative
                                                                                                                                                                                             RESULT 13
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-236-140A-40
                                                                                               ò
                                                                                                                                원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82.2%; Score 30.4; DB 3; Length 52; 59.4%; Pred. No. 4.2; tive 12; Mismatches 1; Indels
                                                                                                                                                           ADDRESSEE: OPPEMBLINER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
STATE: CALIFORNIA
COUNTRY: US
ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OOPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PACHALIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILLING DATE: 22-Jan-1999
CLASSIFICATION: -Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: CLULIman, Louis C.
REGISTRATION NUMBER: 39,645
REPERENCE/OCKET NUMBER: 20263.332 / 1146.020
TELEPHONE: (949) 822.6000
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Been, Michael D.
APPLICANT: Rosenstein, Sarah P.
APPLICANT: Perrotta, Anne T.
TITLE OF INVENTION: ENTYMATIC RNA MOLECULES
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSE: Lyon & Lyon
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNUGGGCAUGCG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 recacercerceses 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear SEQ ID NO: 80: US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Los Angeles
STATE: California
COUNTX: U.S.A.
ZIP: 90071-2066
ZOMPUTER READBALE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
```

us-09-699-667e-63.std.rni

```
Wed Mar 16 10:42:48 2005
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
82.2%; Score 30.4; DB 1; Length 80;
Best Local Similarity 78.1%; Pred. No. 4.6;
Matches 25; Conservative 6; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCG 35
FILING DATE: May 5, 1994

CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/821,155
FILING DATE: January 13, 1992
ATTORNEY/AGENT INFORMATION:
NAME: WATCHING, NUMBER: 207/093
REFERENCE/DOCKET NUMBER: 207/093
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEFAX: (213) 955-0440
TELEFAX: (213) 855-0440
INPORMATION FOR SEQ ID NO: 16: SEQUENCE CHARACTERISTICS:
LENGTH: 80 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
'STRANDEDNESS: single
'JOPOLOGY: linear
US-08-238-963A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
```

Search completed: March 15, 2005, 15:26:38 Job time : 62.3421 secs

THIS PAGE BLANK (uspro)

```
5.4, Appl
4, Appl
4, Appl
80, Appl
80, Appl
81, Appl
282, App
306, App
306, App
306, App
306, App
                                                                                                 March 15, 2005, 15:26:58 ; Search time 33.2456 Seconds (without alignments) 984.356 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 54,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                  1250976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Issued Patents NA:*

.: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

:: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

:: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

:: /cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:*

:: /cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:*

:: /cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-612-895A-54
US-09-093-293-54
US-09-093-293-54
US-09-882-246-54
US-08-096-027-4
US-08-466-725-4
US-08-466-725-4
US-08-700-757-80
US-08-700-757-80
US-08-700-757-81
US-08-700-757-81
US-08-171-389-282
US-08-171-389-282
US-08-171-389-282
US-08-475-28A-282
US-08-482-080A-282
US-08-482-080A-282
US-08-482-080A-282
US-09-354-947-282
US-09-354-947-282
US-09-060-299-306
US-09-060-299-307
                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                               1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                  nucleic search, using sw model
                                                                                                                                                                                                            ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                           IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                  US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match
                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                        Title:
Perfect score:
                                                                  OM nucleic
                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Result
```

υυ

Sequence 41, Appl Sequence 41, Appl Sequence 41, Appl Sequence 41, Appl Sequence 71, Appl Sequence 79, Appl Sequence 79, Appl Sequence 79, Appl Sequence 19, Appl Sequence 1824, A Sequence 10299, A Sequence 10299, A Sequence 67, Appl Sequence 67,		
C 28 13.4 67.0 48 2 US-08-739-167-41 C 29 13.4 67.0 48 3 US-08-404-796-41 C 30 13.4 67.0 48 3 US-08-931.869-41 C 31 13.4 67.0 48 3 US-08-931.869-41 C 32 13.4 67.0 48 3 US-08-931.869-41 C 32 13.4 67.0 48 3 US-09-236-140A-41 C 33 13.4 67.0 56 1 US-08-741.881-79 C 35 13.4 67.0 56 1 US-08-741.881-79 C 36 13.4 67.0 56 3 US-08-739-167-79 C 37 13.4 67.0 56 3 US-08-931.869-79 C 38 13.4 67.0 56 3 US-08-931.869-79 C 39 13.4 67.0 56 3 US-08-931.967-1967-1867-1967-1967-1967-1967-1967-1967-1967-19	RESULT 1 US-08-612-895A-54  1 US-08-612-895A-54  1 Sequence 54, Application US/08612895A  1 Sequence 54, Application US/08612895A  1 Sequence 54, Application US/08612895A  2 SEPLICANT: GOLD, LARRY  2 APPLICANT: MILLIS, MICHAEL  3 APPLICANT: MILLIS, MICHAEL  3 APPLICANT: MILLIS, MICHAEL  3 APPLICANT: MINGUIST, STEVEN  4 APPLICANT: ATKINSON, BRENT  7 TITLE OF INVENTION: LIGANOS AND  7 TITLE OF INVENTION: LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS AND  7 TITLE OF INVENTION: OF NUCLEIC ACID LIGANOS  8 COUNTRY: USA  2 TIPLE COLORADO  8 TATES COLORADO  8 TATES COLORADO  8 TATES COLORADO  9 TOTAY: MAGNESS: ACID ACID ACID ACID ACID ACID ACID ACID	; PRIOR APPLICATION DATA:  # APPLICATION NUMBER: 08/143,564  # FILING DATE: 25 October 1993  # ATTORNEY/ACENT INFORMATION:  # NAME: Barry 1. Swanson  # REGISTRATION NUMBER: 33,215  # REFERENCE/DOCKET NUMBER: NEX10/PCT-US  # TELECOMMUNICATION INFORMATION:  # TELECOMMUNICATION INFORMATION:  # TELEPAX: (303) 793-3433  # TELEPAX: (303) 793-3433

Gaps

ò

```
71.0%; Score 14.2; DB 3; Length 37; 84.2%; Pred. No. 6.5e+02; tive 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: GOLD, LARRY
APPLICANT: GOLD, LARRY
APPLICANT: GOLD, TARD
APPLICANT: RINGGUIST, STEVEN
APPLICANT: RINGGUIST, STEVEN
APPLICANT: JENSEN, KIRK
APPLICANT: JENSEN; RING
TITLE OF INVENTION: LIGANDS BY EXPONENTIAL
TITLE OF INVENTION: ENRICHMENT: PHOTOSELECTION
TITLE OF INVENTION: SOLUTION SELEX
NUMBER OF SEQUENCES: 64
CORRESPONDENCE ADDRESS:
ADDRESSES: SWANDSON & BRATESCHUN, L.L.C.
STREET: 8400 B. Prentice Avenue, Suite 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER REALBLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 MG
MEDIUM TYPE: storage
COMPUTER: ISM
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORDERFECT 8.0
SOFTWARE: APPLICATION DATA:
APPLICATION NUMBER: US/09/459,553
NAME: Barry J. Swanson
REGISTRATION NUMBER: 33,215
REPRENCE/DOCKET NUMBER: NEX10/US-CON
TELECOMMUNICATION INFORMATION:
TELEPAX: (303) 793-333
TELEPAX: (303) 793-3433
INPORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
LENGTH: 37 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER:
PRIOR APPLICATION NUMBER:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
PLING DATE:
APPLICATION NUMBER:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
PLING DATE:
PLING DATE:
PRIOR APPLICATION NUMBER:
PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 10 JUNE 1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 54, Application US/09459553
Patent No. 6291184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/093,293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 GGCGCACGGAUAAGGAACC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear
US-09-093-293-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Englewood
STATE: Colorado
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                             Query Match 71.0%; Score 14.2; DB 1; Length 37; Best Local Similarity 84.2%; Pred. No. 6.5e+02; Matches 16; Conservative 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 54, Application US/09093293

Patent No. 6001577

GENERAL INFORMATION:

APPLICANT: GOLD, LARRY

APPLICANT: MILLIS, MICHAEL

APPLICANT: KNCH, TAD

APPLICANT: ATKINSON, BRENT

ITILE OF INVENTION: SYSTEMATIC EVOLUTION OF

TITLE OF INVENTION: LIGANDS BY EXPONENTAL

TITLE OF INVENTION: GRAICHMENT: PHOTOSELECTION

TITLE OF INVENTION: OF NUCLEIC ACID LIGANDS AND

TITLE OF INVENTION: SOLUTION SELEX

NUMBER OF SEQUENCES: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Swanson & Bratschun, L.L.C.
8400 E. Prentice Avenue, Suite 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 80111
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 MG
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordberfect 8.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12 GGCGCACGGADAAGGAACC 30
              information for SEQ ID NO: 5

SEQUENCE CHARACTERISTICS:

LENGTH: 37 base pairs

TYPE: nucleic acid

STRANDEDNESS: single

TOPOLOGY: linear

US-08-612-895A-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS: ADDRESSE: Swanson &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 8400 E. CITY: Englewood STATE: Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Colorado
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-09-093-293-54
```

us-09-699-667e-64.giz.rni

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                             71.0%; Score 14.2; DB 4; Length 37; 84.2%; Pred. No. 6.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIGANDS BY EXPONENTIAL ENRICHMENT: PHOTOSELECTION OF NUCLEIC ACID LIGANDS AND
                                                                       ATTORNEY AGENT INFORMATION:
NAME: Barry J. Swanson
REGISTATION UNDRER: 33,215
REFERENCE/DOCKET NUMBER: NEXIO/US-CON
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 793-3333
TELEPHONE: (303) 793-3333
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Swanson & Bratschun, L.L.C. STREET: 8400 E. Prentice Avenue, Suite 200 CITY: Englewood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3 1/2 inch, 1.44 MB
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYEE: COMPUTER: ISM
COMPUTER: ISM
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/10562A
                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: linear; SEQ ID NO: 54: US-09-882-246-54
                 FILING DATE: 11 JUNE 1990
APPLICATION NUMBER: 07/931,473
FILING DATE: 17 AUGUST 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NEX10/PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 54, Application PC/TUS9410562A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/123,935
FILING DATE: 17 September 1993
FILING DATE: 17 September 1993
PRIOR APPLICATION DATA: 08/143,564
FILING DATE: 25 October 1993
ATTORNEY/AGENT INFORMATION:
NAME: BARTY J. Swanson
REGISTRATION NUMBER: 33,215
REFERENCE/DOCKET NUMBER: NEXIO/PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOLUTION SELEX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: GOLD, LARRY
APPLICANT: WILLIS, MICHAEL
APPLICANT: WOCH, TAD
APPLICANT: RINGUIST, STEVEN
APPLICANT: ATKINSON, BRENT
TITLE OF INVENTION: SYSTEMATIC
TITLE OF INVENTION: LIGANDS BY
TITLE OF INVENTION: ENRICHMENT:
TITLE OF INVENTION: SOLUTION SE
NUMBER OF SEQUENCES: 64
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GCCCAUGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 GGCGCACGGAUAAGGAACC 30
                                                                                                                                                                                                                                                                     LENGTH: 37 base pairs
                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 84.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: C
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                               Score 14.2; DB 3; Length 37; Pred. No. 6.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Swanson & Bratschun, L.L.C.
STREET: 8400 E. Prentice Avenue, Suite 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENRICHMENT: PHOTOSELECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Diskette, 3.5 inch, 1.44 MG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LIGANDS BY EXPONENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: «Unknown»
APPLICATION NUMBER: PCT/US94/10542
FILING DATE: 18 September 1994
APPLICATION NUMBER: 08/123,935
FILING DATE: 17 September 1993
APPLICATION NUMBER: 08/143,564
FILING DATE: 25 October 1993
APPLICATION NUMBER: 07/174,131
FILING DATE: 10 JUNE 1991
                                                                                                                                                                                                                                                                                                                                                                                                71.0%; Scc...
84.2%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATKINSON, BRENT
TITLE OF INVENTION: SYSTEMATIC EVOLUTION
        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/931,473
FILLING DATE: 17 AUGUST 1992
ATTORNEY/AGENT INPORMATION:
NAME: BATTY J. SWANSON
REGISTRATION NUMBER: 33,215
REPERENCE/DOCKET NUMBER: NEX10/US-CON
TELEFOND : (303) 793-333
TELEFOND : (303) 793-333
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/882,246
FILING DATE: 14-0un-2001
FILING DATE: 14-0un-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/093,293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 8.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 54, Application US/09882246
Patent No. 6482594
GENERAL INFORMATION:
APPLICANT: GOLD, LARRY
WILLIS, MICHAEL
KOCH, TAD
07/536,428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RINGOUIST, STEVEN
JENSEN, KIRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12 GGCGCACGGAUAAGGAACC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 64
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 80111
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Englewood
STATE: Colorado
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 84.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                      LENGTH: 37 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
US-09-882-246-54
                                                                                                                                                                                                                                                                                                                                                                        US-09-459-553-54
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
```

ઠે

ö

```
FILING DATE: 29-FEB-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-461-725-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                 Query Match 71.0%; Score 14.2; DB 5; Length 37; Best Local Similarity 84.2%; Pred. No. 6.5e+02; Matches 16; Conservative 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C. STREET: Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
SOCTAME: Patentin Release #1.0, Version #1.25
SUGNERNT APPLICATION DATA:
APPLICATION NUMBER: US/08/096,027
FILING DATE: 22-UL-1993
PRIOR APPLICATION NUMBER: US 07/711,334
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/367,894
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: PCT/US90/03451
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/361,944
FILING DATE: 05-JUN-1999
PRIOR APPLICATION NUMBER: US 07/223,089
FILING DATE: 15-JUN-1989
PRIOR APPLICATION NUMBER: US 07/223,089
FILING DATE: 12-JUN-1989
PRIOR APPLICATION NUMBER: US 07/223,089
FILING DATE: 22-JUL-1988
PRIOR APPLICATION NUMBER: US 07/216,390
FILING DATE: 10-JUN-1988
PRIOR APPLICATION NUMBER: US 07/216,390
FILING DATE: 07-JUL-1988
FILING DATE: 07-JUL-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/08096027;
Sequence 4, Application US/08096027;
GENERAL INFORMATION:
APPLICANT: O'Donnell, Michael A.
APPLICANT: Duda, Rosemary B.
APPLICANT: Downelf, William C.
APPLICANT: Young, Richard A.
TITLE OF INVENTION: RECOMBINANT BCG VACCINES
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 07-JUL-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/163,546
FILING DATE: 03-MAR-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US88/00614
                    TELEFAX: (303) 793-3433
; INFORMATION FOR SEQ ID NO: 54:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 37 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                 1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                               12 GCCCACGAUAAGGAACC 30
(303) 793-3333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
US-08-096-027-4
                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
PETING DATE: 1988

ATOMNE, GOTAMNER, US 97/20,451

PELING DATE: 0.2-MAR 1987

ATOMNEY ARRENT INCOMATION:
NAME: GOTAMNER: 0.2-MAR 13,227

REGISTARTION NUMBER: 0.41

TELERAM: (17) 861-2540

TELERAM: (18) 861-2640

TELERAM: (18) 861-2640

TELERAM: (18) 861-2640

TELERAM: (19) 861-2640

TELERAM: (18) 861-8640

TELERAM: (19) 861-8640

TELERAM: (
```

```
Sequence 80, Application US/07832905B
Patent No. 5580722
GENERAL INFORMATION:
APPLICANT: J. Gordon Foulkes, et al.
TITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Disease.
NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSEE: John P. White, Esq.
STREET: 30 Rockefeller Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 13.8; DB 2; Length 39;
Pred. No. 1e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Mismatches
                                            APPLICATION NUMBER: US 07/711,334
PRIOR APELICATION NUMBER: US 07/367,894
FILING DATE: 06-UNN-1991
PRIOR APPLICATION DATA: US 07/367,894
FILING DATE: 19-UNN-1999
PRIOR APPLICATION DATA: BAPLICATION DATA: BAPLICATION DATA: BAPLICATION DATA: BAPLICATION DATA: BAPLICATION DATA: BAPLICATION NUMBER: US 07/223,089
FILING DATE: 22-UUL-1988
PRIOR APPLICATION DATA: APPLICATION NUMBER: US 07/216,390
FILING DATE: 03-MAR-1988
PRIOR APPLICATION DATA: APPLICATION NUMBER: US 07/216,390
FILING DATE: 03-MAR-1988
PRIOR APPLICATION NUMBER: US 07/20,451
FILING DATE: 03-MAR-1988
PRIOR APPLICATION NUMBER: US 07/020,451
FILING DATE: 03-MAR-1988
PRIOR APPLICATION NUMBER: US 07/020,451
FILING DATE: 03-WAR-1987
APPLICATION NUMBER: US 07/020,451
FILING DATE: 03-WAR-1987
ATTORNEY APPLICATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: WHI89-05A5
TELECOMUNICATION INPORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: MIB9-05A5
TELECOMUNICATION INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: DNA (genomic) US-08-460-981-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 82.4%;
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (617) 861-9540 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 39 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                         PRIOR APPLICATION DATA APPLICATION NUMBER: FILING DATE: 06-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-07-832-905B-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 13.8; DB 1; Length 39;
Pred. No. 1e+03;
1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: US

CONPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/460,981

TITING DATE: 05-UM-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: O'Donnell, Michael A.
APPLICANT: O'Donnell, Michael A.
APPLICANT: DeWolf, William C.
APPLICANT: Aldovini, Anna
APPLICANT: Aldovini, Anna
APPLICANT: Achard A.
TITLE OF INVENTION: RECOMBINANT BCG VACCINES
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C
STREET: Two Militia Drive
                                          PRIOR DATE:

PRIOR DATE:

APPLICATION NUMBER: US 07/223,089
FILING DATE: 22-ULL-1988
FILING DATE: 07-ULL-1988
FILING DATE: 03-MAR-1988
FILING DATE: 29-FEB-1988
FILING DATE: 29-FEB-1988
FILING DATE: 29-FEB-1988
FILING DATE: 29-FEB-1988
FILING DATE: 02-MAR-1987
ATTORNEY/AGENT, INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: WHI89-05A2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-9540
THELEPA: (617) 861-9540
INFORMATION FOR SEQ ID NO. 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/096,027
FILING DATE: 22-JUL-1993
APPLICATION NUMBER: US 07/361,944
FILING DATE: 05-JUN-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/08460981
Patent No. 5830475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69.0%;
82.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 39 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 14; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TOPOLOGY: Iii
; MOLECULE TYPE:
US-08-461-725-4
```

셤

```
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                     RESULT 11
US-09-518-914-33/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                    ò
                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 80, Application US/08700757
Patent No. 5846720
GENERAL INFORMATION: CAPIDAR et al.
TITLE OF INVENTION: EXPRESSION OF GENES ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISEASE
NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Indels
            MEDIUM TYPE: PLOPPY disk

COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC-DOS/MS-DOS
SOFFWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/832,905B
FILING DATE: 19920207
CLASSIFICATION: 435
ATTONENT/AGENT INPORMATION:
NAME: White: 26,678
REGISTRATION NUMBER: 28,678
REGISTRATION NUMBER: 28,678
REGISTRATION NUMBER: 212-977-9550
TELEFPAX: 212-64-0525
TELEFPAX: 212-64-0525
TELEFRAX: 212-64-0525
TELER: A22523 coop ui
INPORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 35 base pairs
TYPE: NUCLEIC ACID
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/700,757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 13.6; DB 1;
Pred. No. 1.3e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUDRESS:
AUDRESS:
TEET: JOAN P. White, Esq.
TEET: 1185 Avenue of the Americas
E: New York
T: New York
T: New York
To New York
To New York
To New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15 GGGAAGGCTAAGGGAGCC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 2613
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 35 base pairs
nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 212-391-0525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: New York
COUNTRY: USA
ZIP: 10036
COMPUTER READABLE FORM:
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
STREET: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-07-832-905B-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
US-08-700-757-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
US-07-812-905B-81/c
US-07-812-905B-81/c
Sequence 81, Application US/07832905B
Patent No. 5580722
GENERAL INFORMATION:
APPLICANT: J. Gordon Foulkes, et al.
APPLICANT: J. Gordon Foulkes, et al.
TITLE OF INVENTION: Methods of Transcriptionally
TITLE OF INVENTION: Disease.
TITLE OF INVENTION: Disease.
NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS:
ADDRESSE: John P. White, Esq.
STREET: 30 Rockefeller Plaza
                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ó
                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Borowsky, Beth B.
APPLICANT: Borowsky, Beth B.
APPLICANT: Borowsky, Beth B.
APPLICANT: Lakhlani, Parul P.
APPLICANT: Lakhlani, Parul P.
APPLICANT: Adham, Wika
TITLE OF INVENTION: DNA ENCODING SNORF36a AND SNORF36b RECEPTORS
FILE REFERENT APPLICATION NUMBER: US/09/518,914
CURRENT APPLICATION NUMBER: US 09/303,593
EARLIER APPLICATION NUMBER: US 09/303,593
EARLIER PILING DATE: 1999-05-03
NUMBER OF SEQ ID NOS: 44
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 33
LENGTH: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA CRGANISM: Artificial Sequence PEATURE: TRAFETURE: PRATURE: 1 POTHER INFORMATION: Description of Artificial Sequence: Primer/Probe US-09-518-914-33
                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                Query Match 68.0%; Score 13.6; DB 2; Length 35; Best Local Similarity 75.0%; Pred. No. 1.3e+03; Matches 15; Conservative 1; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/832,905B
FILING DATE: 19920207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match

68.0%; Score 13.6; DB 3;
Best Local Similarity 70.0%; Pred. No. 1.3e+03;
Matches 14; Conservative 2; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                   Sequence 33, Application US/09518914
Patent No. 6413731
                                                                                                                                                                                                           1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                        15 GGGAAGGCTAAGGGAGCC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 GGTCCATGGCTATGGGATCC 7
; TOPOLOGY: linear; MOLECULE TYPE: DNA (genomic) US-08-700-757-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 10112
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: New York STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
```

us-09-699-667e-64.siz.rni

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 47;
                                                                                                                                                                                                                                 APPLICANT: Edwards, Cynthia A. APPLICANT: Edwards, Charles R. APPLICANT: Andrews, Beth M. APPLICANT: Andrews, Beth M. APPLICANT: Andrews, Beth M. APPLICANT: Tryin, Lisa M. APPLICANT: Fry, Kirk E. TITLE OF INVENTION: Sequence-Directed DNA Binding TITLE OF INVENTION: Molecules, Compositions and Methods NUMBER OF SEQUENCES: 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/171,389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 13.6; DB 1;
Pred. No. 1.3e+03;
1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 33,875
REFERENCE/DOCKET NUMBER: 4600-0175/G19P3
TELECOMMUNICATION INFORMATION:
TELEPONS: (415) 324-0860
TELEFAX: (415) 324-0860
TELEFAX: (415) 324-0960
INFORMATION FOR SEQ ID NO: 282:
SEQUENCE CHARATERISTICS:
LENGHH 47 Date pairs
TYPE: muchania.
                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Genelabs Technologies, Inc
STREET: 505 Penobscot Drive
CITY: Redwood City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGINAL SOURCE:
INDIVIDUAL ISOLATE: Human renin gene US-08-171-389-282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/123,936
FILING DATE: 17-SEP-1993
PRIOR APPLICATION NUMBER: US 07/996,783
FILING DATE: 23-DEC-1992
PROR APPLICATION DATA:
APPLICATION NUMBER: US 07/723,618
FILING DATE: 27-UN-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/081,070
FILING DATE: 22-UN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Fablan, GATY R.
REGISTRATION NUMBER: 33,875
                                                                                                                                                                        Sequence 282, Application US/08171389
Patent No. 5578444
GENERAL INFORMATION:
                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28 GGGAAGGGCTAAGGGAGCC 47
                                                                   25 GGGAAGGGCTAAGGGAGCC 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68.0%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query:Match
Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J
                                                                                                                                   RESULT 14
US-08-171-389-282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY:
STATE:
                              ò
                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
US-08-700-757-81/c
; Sequence 81, Application US/08700757
; Patent No. 5846720
; Patent No. 5846720
; Patent No. 5946720
; TITLE OF INVENTION: METHODS OF DETERMINING CHEMICALS THAT MODULATE
; TITLE OF INVENTION: EXPRESSION OF GENES ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISEASE
; TITLE OF INVENTION: CARDIOVASCULAR DISEASE
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68.0%; Score 13.6; DB 2; Length 43; 75.0%; Pred. No. 1.3e+03; ive 1; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                       Score 13.6; DB 1; Length 43;
Pred. No. 1.3e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATR:
APPLICATION NUMBER: US/08/700,757
                                                                                                                                                                                                                                                                                                                                                                                                                              1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIPICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P. REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 26134-HA
TELECHONE: 212-278-0400
TELEFAX: 212-391-0525
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: WALCE, JOHN P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 26,34-H
TELEPHONE: 212-677-9550
TELEFAX: 212-64-0525
TELEFAX: 42253 coop ui
TELEFAX: 42253 coop ui
INFORMATION FOR SEQ ID NO: 81:
SEQUENCE CHARACTERISTICS:
LENGTH: 43 base pairs
TYPE: NUCLEIC ACID
STRANDEDNESS: SINGLE
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25 GGGAAGGGCTAAGGGAGCC 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81:
                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 75.0%;
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 43 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: 11.

MOLECULE TYPE:
US-08-700-757-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                             US-07-832-905B-81
```

a ઠે

ö

```
RESULT 18
REPLACE INFORMATION:
REPLACE 18
REPLACE INFORMATION:
REPLACE 18
REPRESENT AND REPLACE 18
REPRESENT 18
REPLACE 18
REPL
```

Search completed: March 15, 2005, 20:44:24 Job time : 35.2456 secs

28 GGGAAGGCTAAGGGAGCC 47

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Minimum DB Maximum DB

Database

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 44 04-NOV-1999;
ANANVORANICH SIRINART (GA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
BD111113 Genetic i
CO542153 Sequence
AR063795 Sequence
AR063795 Sequence
130159 Sequence
130159 Sequence
130159 Sequence
130159 Sequence
129410 Sequence
129410 Sequence
129410 Sequence
AX544881 Sequence
AX544881 Sequence
AX544881 Sequence
AX544881 Sequence
AX544882 Sequence
AX544882 Sequence
AX544882 Sequence
AX545651 Sequence
AX545653 Sequence
AX545654 Sequence
AX545654 Sequence
AX545654 Sequence
AX545654 Sequence
AX545654 Sequence
AX545655 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90.0%; Score 18; DB 6; Length 57;
88.9%; Pred. No. 2.7e+02;
ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                   RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   other seguences; artificial seguences.
                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                  AX012282 57 bp
Sequence 44 from Patent WO9955856
                                                AR217128
AR063796
AR032670
I129410
I129410
AR544881
AR544881
AR544881
AR544883
AR544883
AR544883
AR54565
AR54565
AR545653
AR545653
AR545653
AR545653
AR545653
AR545653
AR545653
  BD131313
CQ542153
AR063795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                     AX012282.1 GI:9998343
                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 88.9
Matches 16; Conservative
   RESULT 1
AX012282
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
CEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
AX012283
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
   ORIGIN
                                                    υυυ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012285 Sequence
AX012286 Sequence
AX012289 Sequence
AX012289 Sequence
AX012290 Sequence
AX012292 Sequence
AX012292 Sequence
AX012392 Sequence
AX013977 Sequence
AX018977 Sequence
AX018977 Sequence
AX018977 Sequence
AX018979 Sequence
                                                                                   March 15, 2005, 12:35:18 ; Search time 394.386 Seconds (without alignments) 2457.248 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX012282 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                           1981570
             GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                  4708233 segs, 24227607955 residues
                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                            nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012285

AX012286

AX012286

AX012289

AX012289

AX012289

AX012292

CQT86869

AX011977

AR093825

AR169735

AR169735

AR165567

AX445501

AX445501

AX445501
                                                                                                                                                          1 ggcgcauggcuaagggaccc 20
                                                                                                                                                                                IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                              US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                          GenEmbl: *
1: gb ba: *
1: gb htg: *
1: gb ow: *
1: gb ow: *
1: gb pl: *
2 gb pl: *
2 gb pl: *
2 gb pl: *
3 b te: *
3 b ete: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
Query
Match Length D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 60
```

PAT 06-SEP-2000

PAT 06-SEP-2000

linear

RNA

57 bp Sequence 45 from Patent WO9955856. AX012283.1 GI:9998344

synthetic construct synthetic construct

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

DEFINITION

17.4 17.8 114.2 114.2 114.2 113.8 113.8

Score

Result Š ö

Gaps

;

ORIGIN

요

```
ö
                                                                                                                                                                                                                                                                                                                                              PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 9955856-A 50 04-00V-1999;

PARANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers

1. 57

/ organism="synthetic construct"
//mol_type="unassigned RNA"
//db xref="taxaniaged RNA"
//note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-00V-1999;
ANANVORANICH SIRINART (GA): LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                Gaps
                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90.0%; Score 18; DB 6; Length 57; 88.9%; Pred. No. 2.7e+02; 1ive 2; Mismatches 0; Indels
                                                                                                                                          Length 57;
                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                              0; Indels
                                                                                                                                          90.0%; Score 18; DB 6; I
88.9%; Pred. No. 2.7e+02;
iive 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 / ...57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/note="synthetic nucleic acid"
                1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                        Sequence 49 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX012288 57 bp
Sequence 50 from Patent WO9955856.
Location/Qualifiers
                                                                                                                                                                                                                    3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40 CGCATGCTAAGGGACCC 57
                                                                                                                                                                                                                                        40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                  AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                      synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 88.9°
Matches 16; Conservative
                                                                                                                                                             Best Local Similarity 88.9
Matches 16, Conservative
                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
VERSION
KEYWORDS
                    source
                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
AX012288
                                                                                                                                                                                                                                                                                                          RESULT 5
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 06-SEP-2000
                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 995586-A 45 04-NOV-1999;

ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955656.A 47 04-NOV-1999;

ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Barent: WO 9955856-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                      90.0%; Score 18; DB 6; Length 57; 88.9%; Pred. No. 2.7e+02; ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 90.0%; Score 18; DB 6; Length 57; Best Local Similarity 88.9%; Pred. No. 2.7e+02; Matches 16; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                            1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon.32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic construct
synthetic construct
other sequences, artificial sequences.
other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012286 57 bp
Sequence 48 from Patent WO9955856.
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012285 57 bp
Sequence 47 from Patent W09958856.
AX012285 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                 3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                    40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                              16; Conservative
                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
AX012285
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                              Matches
                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                      REFERENCE
                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
AX012286
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

8

g

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                           Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856.A 46 04-NOV-1999;

NANNVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 54 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERRROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 24-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 87.0%; Score 17.4; DB 6; Length 57; 1 Similarity 84.2%; Pred. No. 5.5e+02; 16; Conservative 2; Mismatches 1; Indels
                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 85.0%; Score 17; DB 6; Length 18; Best Local Similarity 88.2%; Pred. No. 1e+03; Matches 15; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                    /organism="synthetic construct"
/mol Lypp="unassigned RNA"
/mol Expe="taxon:32630"
/noFe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .18
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                        synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CQ786869 29 bp DN Sequence 46 from Patent WO2004021010.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012292 18 bp
Sequence 54 from Patent WO9958856.
AX012292 GI:9998353
AX012292.1 GI:9998353
                                                                                  Sequence 46 from Patent WO9955856.
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39 GGCATGGCTAAGGGACCC 57
40 CGCATGGCTAAGGGACCC 57
                                                                                                                                  AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GCATGGCTAAGGGACCC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CQ786869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
CQ786869
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
AX012292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                  AX012284
LOCUS
                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                   RESULT
                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                   ö
                                                                                                                                                                                                           PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                    Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: Wo 995886-A 51 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Nucleic acid enzyme for rna cleavage
Parant: WO 995886-A 52 04-NOV-1999;
ANANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHEREROOKE (CA)
Location/Qualifiers
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.0%; Score 18; DB 6; Length 57;
88.9%; Pred. No. 2.7e+02;
tive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90.0%; Score 18; DB 6; Length 57; 88.9%; Pred. No. 2.7e+02; ive 2; Mismatches 0; Indels
                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
              Score 18; DB 6; I
Pred. No. 2.7e+02;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_type="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /oxganism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32610"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNA
                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            other sequences; artificial sequences.
                                                                                                                                                                                                      57 bp
Sequence 51 from Patent W09955856.
AX012289
AX012289.1 GI:9998350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012290 57 bp
Sequence 52 from Patent W09955856.
AX012290 GI:9998351
                                                                                                      CGCATGGCTAAGGGACCC 57
                                                                                  3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 CGCAUGGCUAAGGGACCC 20
              Query Match
Best Local Similarity 88.9%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 16; Conserval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
AX012290
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                       AX012289
LOCUS
                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                            RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
```

셤

```
Query Match
Best Local Similarity 78.9
Matches 15; Conservative
                                                                                                                                           Query Match 71.0
Best Local Similarity 78.9
Matches 15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Atkinson, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Atkinson, B.
                                                                                                                                                                                                                                                                                                       AR169735
                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
AR255367
                                                                                                                                                                                                                                                                          RESULT 14
AR169735
                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 08-SEP-2000
                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                Nakamura, Y. and Furukawa, Y. Method of diagnosing colon and gastric cancers Patent: WO 2004021010-A 46 11-MAR-2004; Oncotherapy Science, Inc. (JP); Japan as represented by the president of the university of Tokyo (JP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Systematic evolution of ligands by exponential enrichment: photoselection of nucleic acid ligands and solution selex Patent: US 5763177-A 54 09-JUN-1998;
                                                                                                                                                                                      1. .29
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
/noce="Artificially synthesized primer sequence
RT-PCR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 37)
Gold, L., Willis, M., Koch, T., Ringquist, S., Jensen, K. and
Atkinson, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 37)
Gold, L., Willis, M., Koch, T., Ringquist, S., Jensen, K. and
                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                    79.0%; Score 15.8; DB 6; Length 29; 78.9%; Pred. No. 4e+03; tive 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 71.0%; Score 14.2; DB 6; Best Local Similarity 78.9%; Pred. No. 2.7e+04; Matches 15; Conservative 1; Mismatches 3;
                                                                      other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR093825
Sequence 54 from patent US 6001577.
AR093825.
AR093825.1 GI:10020573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37 bp
Sequence 54 from patent US 5763177.
AR011977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="unknown"
                                                                                                                                                                                                                                                                                                                                                              2 gcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                                                                                                                               9 GCGCATGGCTTAGGGACGC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12 GGCGCACGGATAAGGAACC 30
CQ786869.1 GI:45721861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR011977.1 GI:3969967
                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 78.9%
Them 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                       ORGANISM
                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
AR093825
ACCESSION
            VERSION
KEYWORDS
SOURCE
                                                                                     REFERENCE
                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR011977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QQ
                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 20-DEC-2002
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
Systematic evolution of ligands by exponential enrichment: photoselection of nucleic acid ligands and solution selex Patent: US 6001877-A 14-DEC-1999; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Systematic evolution of ligands by exponential enrichment: photoselection of mucleic acid ligands and solution selex Patent: US 6291184-A 54 18-SEP-2001; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Systematic evolution of ligands by exponential enrichment: photoselection of mucleic acid ligands Patent: US 6482594-A 19-NOV-2002; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 37)
Gold,L., Willis,M., Koch,T., Ringquist,S., Jensen,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
Unclassified.
1 (bases 1 to 37)
Gold,L., Willis,M., Koch,T., Ringquist,S., Jensen,K. and
                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71.0%; Score 14.2; DB 6; Length 37;
                                                                                                                                                                                        Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                  3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           71.0%; Score 14.2; DB 6; 78.9%; Pred. No. 2.7e+04; ive 1; Mismatches 3;
                                                                                                                                                                                        71.0%; Score 14.2; DB 6; 78.9%; Pred. No. 2.7e+04; iive 1; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37 bp 1
Sequence 54 from patent US 6482594.
AR255367
                                                                                  1. .37
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 54 from patent US 6291184.
ARI69735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /moi_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .37
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="unknown"
                                                                                                                                                                                                                                                                                                   12 GGCGCACGGATAAGGAACC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 GGCGCACGGATAAGGAACC 30
                                                                                                                                                                                                                                                                           1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR169735.1 GI:17907643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR255367.1 GI:27304416
```

```
0; Gaps
Best Local Similarity 78.9%; Pred. No. 2.7e+04;
Matches 15; Conservative 1; Mismatches 3; Indels
```

0;

중 음

Search completed: March 15, 2005, 18:04:58 Job time : 397.386 secs

THIS PAGE BLANK (USPTO)

Test sequ DNA bindi Human ren

1 Duplex ol Human SNP Human DP- Human DP- Human DP- Oligonucl LRP5 exon LRP5 SNP Human DP- Human

Scoring table:

Searched:

Database

Title: Perfect score:

Sequence:

nucleic

Run on:

```
/bound_moiety= "Bimolecular ribozyme RzB fragment"
/note= "Forms double-stranded region with bases 37-30 of
sequence AAZ57619"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /bound_moiety= "Bimolecular ribozyme RzB fragment"
/note=-"Forms double-stranded region with bases 6-1
Aac87773 St
Aac69524 H
Aax69592 H
Aax17282 Tr
Abe82732 Dt
Abe82312 H
Abv85403 H
Abv85401 H
Abv86171 H
Abv86177 H
                                                                                                                                                                                                                                                                                                                                        Nucleotide sequence of bimolecular ribozyme RzB fragment
                                                                                                                                                                                                                                                                                                                                                        Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lafontaine D;
                                                                                                                                                                                                                                          ALIGNMENTS
                                            ADE80312
                                                                                                                 ABV86171
ABV86177
ABV86173
ABV86170
ABV86176
ABV86176
ABV86175
ABV86175
          AAQ69532
AAT63994
AAX17282
ABK82773
                                                                                                                                                                                    ABV86174
ABV86180
ABV86178
                                                              ABV85402
ABV85403
                                                                                                        AAV85889
                                                                              ABV85401
                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence AAZ57639"
                                                                                                                                                                                                                                                                                     AAZ57640 standard; RNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98CA-02230203
                                                                               0000000000
                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                        entry)
                                            (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                       (first
 668.0
668.0
668.0
668.0
667.0
667.0
667.0
667.0
667.0
667.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc binding
                                                                                                                                                                                                                                                                                                                       05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-NOV-1999
 Synthetic
                                                                                                                                                                                                                                                                                                      AAZ57640;
                                                                                                                                                                                                                                                                    RESULT 1
  U
                                                                                                                                                                                                                                                                                              Abg07884 Oligonuci
Abg07843 Oligonuci
Abg1949 Oligonuci
Aaz1989 PCR prime
Adm29069 HCV plasm
Aag88793 Rat IL-2
Aav82971 Rat CART
Abh39040 Human spl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aaq83629 Human imm
Acd59856 HCV DNAzy
Adi84300 HCV DNAzy
Aaa92220 HSC70-PYE
Aaa92212 HSC70-PYE
Aaa92216 HSC70ATPa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ad166390 Human Nkd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aaz57640 Nucleotid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-act
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aaz57637 Trans-act
Aaz57638 Trans-act
                                                             March 15, 2005, 11:20:37; Search time 110.965 Seconds (without alignments) 1066.957 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aaa92212 F
Aaa92216 F
Abq07884 C
Abq07843 C
                                                                                                                                                                              4316768
           GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                             fotal number of hits satisfying chosen parameters:
                                                                                                                                                             4390206 segs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACD59856
AD184300
AAA92220
AAA92212
AAA92216
ABQ07884
                                             nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ57638
ADL66390
AAQ83629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABQ07843
ABQ01949
AAZ31989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57640
AAZ57636
AAZ57637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADM29069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ88793
AAZ08986
AAV82971
ABN39040
                                                                                                                   ggcgcauggcuaagggaccc 20
                                                                                                                                 IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                geneseqn2003cs:*
geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                              geneseqn2001as:*geneseqn2001bs:*geneseqn2002as:*
                                                                                                                                                                                                                                                                                                                         geneseqn2002bs:*
geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                           geneseqn2003bs:*
                                                                                                                                                                                                                                                             N_Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                     geneseqn1980s:*
geneseqn1990s:*
geneseqn2000s:*
                                                                                                 US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length
                                                                                                                                                                                               Minimum DB seq length: 0 Maximum DB seq length: 60
```

ö

υ

Result Š.

```
9-APR-1999;
                                                                                                                                                                                                                                                                                                                                                           05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stem_loop
                                                                                                                                                                                                                                                                                                                                        AAZ57637;
                                                                                                                                                                                                                                                                                                RESULT 3
                                                                                                                                                                                                                                                                                                           AAZ5763
ò
                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                ô
                          This is the nucleotide sequence of bimolecular ribozyme RzB fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence S'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                     Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /bound_moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
30. 45
7*cag= d
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                         Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.1; 88.
                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%; Pred. No. 1.1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                        Sequence 20 BP; 4 A; 6 C; 8 G; 0 T; 2 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                        20
          Example 5; Fig 4; 52pp; English
                                                                                                                                                                                                                                                        1 eccecaucecuaaceaccc
                                                                                                                                                                                                                                                                                                          AAZ57636 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98CA-02230203
                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20. .25
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52. 57
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perreault J,
                                                                                                                                                                                                                                                                                                                                                  05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem_loop
                                                                                                                                                                                                                                                                                                                               AAZ57636;
                                                                                                                                                                                                                                                                                               RESULT 2
셤
                                                                                                                                                                                                                                    ò
```

```
ö
                                                                                                                                                                                                                           This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAS7641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme in the sequence 5'-H'*GNNHNN-3'. The binding portion of the substrate (cleavege site to 6 nucleotides 3' to the cleaved site of the substrate (cleavege site is represented by *). At least one nucleotide is present 5' to the cleavege site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            700.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /noté= "Forms double stranded region with bases 52-57"
7. 19
7. 19
7. 40
7. 40
7. 40
7. 40
7. 40
7. 40
7. 40
8. 6-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90.0%; Score 18; DB 3; Length 57, 100.0%; Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Prec. ...
diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                          Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ57637 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-096791/08.
```

Lafontaine D;

```
Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         primer; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADL66390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
ADL66390
  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                       This is the nucleotide sequence of ribozyme deltaRzPl.2. This ribozyme cleaves substrate SP1.2 (see AAZ57644). The invention relates to a nucleic acid maryme (e.g. deltaRzPl.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate (continue) is used to cleave a substrate (continue) in the enzyme is used to cleave in a substrate in the reapeutic, biotechnological and disquesting also have other sequence is not shown in the specification, but has been derived from the deltaRzPl.1 sequence (AAZ57636) shown in figure 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l. .6
/*tag≏ a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-acting antigenomic delta ribozyme; viral RNA cleavage;
inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   90.0%; Score 18; DB 3; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                    diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                           Example 1; Page; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40 CGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57638 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ57638

ID AAZ5

XX AAZ

XX AAZ5

DT 15-S

DT 05-A

XX ITAN

XX 
  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
```

```
This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3 -UNNXNN-5. The substrate of the enzyme has the sequence 5 -H*GNNHNN-3. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3 to the cleavage site of the substrate of cleavage site is represented by *). At least one nucleotide is present 5 to the cleavage site of the substrate encleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the an inherited disease. The enzymes also have other therappeutic, biotechnological and disagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New CGX polypeptides and polynucleotides, useful in diagnosing, treating and/or preventing colon and gastric cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               colorectal cancer; colon cancer; gastric cancer; antisense therapy; gene silencing; drug screening; detection; diagnosis; predisposition; cytostatic; vaccine; CGX7; Nkd1; reverse transcription-PCR; RT-PCR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                  New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 94.7%; Pred. No. 29;
Matches 18; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            colon and gastric cancer-associated; CGX protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human Nkdl (CGX7) RT-PCR primer, SEQ ID NO:46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; SEQ ID NO 46; 228pp; English
                                                                                                                                                                                                           Example 1; Fig 2; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39 GGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-AUG-2002; 2002US-0407338P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-AUG-2003; 2003WO-JP010436.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADL66390 standard; DNA; 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakamura Y, Furukawa Y;
WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ONCO-) ONCOTHERAPY (UYIY ) UNIV TOKYO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-239234/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004021010-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
```

ö

```
The invention relates to human colon and gastric cancer-associated (CGX) proteins and their encoding nucleic acids which are differentially expreteins and their encoding nucleic acids which are differentially in capretelal or gastric cancer. 7 of the 8 CKG genes colon cancer-associated genes, 2 [Ly6E (CGX6) gastric cancer. 6 [Ly6E (CGX6) and Ncd1 (CGX7)) were known but had not previously been associated with colon cancer. and 5 were novel. The novel colon cancer-associated genes, 2 [Ly6E (CGX6) and Ncd1 (CGX7)] were known but had not previously been associated with colon cancer. and 5 were novel. The novel colon cancer-associated genes are given in ADL66355). The proteins encoded by these comprising a CGX1-5 nucleis of carcial acid, methods for the recombinant production of CGX1-5; antibodies specific for CGX1-5; antisense polymucleotides or comprising a CGX1-5 nucleic acid, methods for the recombinant production of CGX1-5; antibodies specific for CGX1-5; antisense polymucleotides or methods of treating or preventing colon or gastric cancer; methods of screening for compounds for treating or preventing colon or gastric cancer; methods of screening for compounds for treating or preventing colon or gastric cancer; method for more genes selected from CGX1-7 or CGX8 polymolations for the treatment or preventing colon or gastric cancer comprising a pharmaceutical amount of a CGX polypeptides or fragment thereof, an anticody an antisense polymucleotide, an altificed by screening. The polypeptides, colon and gastric cancer comprising to the treatment or prevention of colon or gastric cancer comprising a pharmaceutical amount of a CGX polypeptide, colon and sirNA, or a compound, identified by screening. The polypeptides, and some colon and gastric cancer or a predisposition are useful in diagnosing colon and gastric cancer or a predisposition or developing colon or gastric cancer and in treating or prevente transcription-PCC The present sequence represents a reverse transcription or colon and gastric cancer and in trea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human immunodificiency virus type 1; HIV-1; Rev protein; RNA ligand 31; photoreactive group; nucleic acid ligand selection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Atkinson B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human immunodificiency virus type 1 Rev protein RNA ligand 31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 79.0%; Score 15.8; DB 12; Length 29; Local Similarity 78.9%; Pred. No. 1.9e+02; les 15; Conservative 2; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Willis M, Koch T, Ringquist S, Jensen K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 29 BP; 4 A; 9 C; 11 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  primer used in an example of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9 ĠĊĠĊĂTĠĠĊTTĂĠĠĠĂĊĠĊ 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ83629 standard; RNA; 37 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94WO-US010562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93US-00123935
93US-00143564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYRE-) UNIV RES CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1995-131369/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9508003-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2003
21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAQ83629;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gold L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
                  ò
```

```
ö
                                                                                                AAQB1580-QB3630 are HIV-1 Rev protein RNA ligands, which were modified by the inclusion of a photoreactive group/s to demonstrate a new nucleic acid (NA) ligand selection method. Where the ligands with a high affinity for the target NA (after irradiation) photocrosslink, enabling them to be seperated from the ligands with low affinity for the target NA. (Updated on 25-MAR-2003 to correct PN field.)
              Selecting nucleic acid ligands for target molecules - by forming complexes then partitioning by photocrosslinking a selective soln. phase extension, useful e.g. in diagnosis or treatment of disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acid molecule; Hepatitis C virus; HCV; Hepatitis B virus; HBV; RNA stability; RNA expression; RNA synthesis; antisense; enzymatic nucleic acid, hammerhead ribozyme; DNAzyme; inczyme; inczyme; amberzyme; G-cleaver ribozyme; decoy molecule; aptamer; HBV reverse transcriptase; Enhancer I region; viral replication; degemerative; disease state; HBV infection; HCV infection; cirrhosis; liver failure; hepatcocallular carcinoma; hepatcotropic; cytostatic; virucide; antiinflammatory; substrate; ss.
                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lee
                                                                                                                                                                                                                                                                     .
0
                                                                                                                                                                                                                                     / Match 71.0%; Score 14.2; DB 2; Length 37; Local Similarity 84.2%; Pred. No. 1.4e+03; les 16; Conservative 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pavco P,
                                                                                                                                                                                                          Sequence 37 BP; 13 A; 8 C; 11 G; 0 T; 5 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Morrissey D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HCV DNAzyme substrate sequence #1546.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mcswiggen J,
                                                                         Disclosure, Fig 16; 137pp; English.
                                                                                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                               12 GGCGCACGGAÜAAGGAACC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-2001; 2001US-0296876P.
24-OCT-2001; 2001US-0335059P.
05-DEC-2001; 2001US-0337055P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-2002; 2002WO-US009187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAR-2001; 2001US-00817879.
08-JUN-2001; 2001US-00877478.
                                                                                                                                                                                                                                                                                                                                                                                                          ACD59856 standard; RNA; 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIBOZYME PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Macejak D,
Roberts E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MCSWIGGEN J. MORRISSEY D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-229207/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MACEJAK D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROBERTS E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LEE P.
DRAPER K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAVCO P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200281494-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Blatt L, N
Draper K,
                                                                                                                                                                                                                                                                                                                                                                                                                                      ACD59856;
                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (DRAP/)
(ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MCSW/)
(MORR/)
(PAVC/)
(LEEP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (RIBO-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MACE/)
                                                                                                                                                                                                                                                          Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                            ACD59856
원
                                                                                                                                                                                                                                                                                                     ò
```

Novel compound useful for treating cirrhosis, liver failure, hepatocellular carcinoma, or condition associated with hepatitis C virus Claim 1; Page 261; 387pp; English infection. invention 

The present invention relates to nucleic acid molecules which modulate the synthesis, expression and/or stability of Hepatitis C virus (HCV) or Hepatitis B virus (HBV) RNA. The nucleic acid molecules include antisense and enzymatic nucleic acid such as hammerhead ribozymes, DNAzymes, inczymes, zinzymes, amberzymes, and G-cleaver ribozymes. DNAzymes, compounds and/or HBV reverse transcriptase primer sequences, as well as oligonucleotides that specifically bind the Enhancer I region of HBV DNA. The nucleic acids may be used to modulate the expression of HBV C genes and HBV viral replication. Also disclosed is a method for screening compounds and/or potential therapies directed against HBV, and compounds that modulate the expression and/or replication of HCV. The compounds and/or potential therapies directed against HBV, and compounds that modulate the expression and/or replication of HCV. The compounds and methods of the invention are useful for the treatment of degenerative and disease states related to HBV and HCV infection, replication and gene expression such as cirrhosis, liver failure, and hepatocellular carcinoma. The present sequence represents a substrate for one of the HCV infection or minus strand DNAzyme sequences disclosed in the present

Sequence 17 BP; 3 A; 3 C; 8 G; 0 T; 3 U; 0 Other;

69.0%; Score 13.8; DB 8; Length 17; 88.2%; Pred. No. 2e+03; 1ve 0; Mismatches 2; Indels 1 GGCGCAUGGCUAAGGGA 17 Gecuceuegechaagega 17 15; Conservative Local Similarity Query Match Matches ઠે

ADI84300 standard; RNA; 17 BP

ADI84300;

(first entry) 03-JUN-2004 HCV DNAzyme substrate sequence #1546.

enzymatic nucleic acid; RNA cleavage; hepatitis C virus; HCV; infection; type I interferon; DNAzyme. 88, HCV

Hepatitis C virus.

US2003125270-A1

03-JUL-2003.

18-DEC-2000; 2000US-00740332

18-DEC-2000; 2000US-00740332

BLATT L. MCSWIGGEN J. ROBERTS E. PAVCO P A. (MCSW/) (ROBE/) (PAVC/) (MACE/) BLAT/)

MACEJACK D

Macejack D; Pavco PA, Roberts E, Mcswiggen J, 'n Blatt

WPI; 2004-031273/03.

Enzymatic nucleic acid molecules which specifically cleave RNA derived from hepatitis C virus (HCV), useful for the treatment of HCV infections, especially in combination with type I interferon therapy. RESULT 8
AD184300
AD2 AD184300
AD3-D
AD3-D . 6

```
The invention relates to an enzymatic nucleic acid molecule which specifically cleaves RNA derived from hepatitis C virus (HCV), in which the binding arms of the enzymatic nucleic acid molecule comprises sequences complementary to any of the defined substrate sequences given in the specification. The nucleic acid molecule may be administered for the treatment of HCV infections, especially in combination with type I interferons. The present sequence represents a HCV DNAzyme substrate
Claim 1; SEQ ID NO 1546; 198pp; English.
                                                                                                                                                                                                                                             sequence.
8X555555555X8
```

Sequence 17 BP; 3 A; 3 C; 8 G; 0 T; 3 U; 0 Other;

Сарв ö 69.0%; Score 13.8; DB 12; Length 17; 88.2%; Pred. No. 2e+03; ive 0; Mismatches 2; Indels ( 1 GGCGCAUGGCUAAGGGA 17 GGCUCGUGGCUAAGGGA 17 Local Similarity 88.2 Query Match Best Loc Matches δ

ò

RESULT 9

AAA92220 standard; DNA; 24 BP

(first entry) 05-JAN-2001

ö

Gaps

ö

Hsc70-PRL1a oligonucleotide primer SEQ ID NO:70.

ATPase; Hsp70; heat shock protein; cytotoxic T lymphocyte; CTL; immune response; infectious disease; malaria; cytotoxic T cell; cytostatic; immunostimulant; cellular immune response inducer; protozoacide; leukaemia; cancer; primer; ss.

WO200049041-A1.

24-AUG-2000

18-FEB-2000; 2000WO-JP000941

99JP-00041535 19-FEB-1999; (SUME ) SUMITOMO ELECTRIC IND

8

Yui K; Shinbara N, Udono H,

WPI; 2000-543748/49.

Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer. 

Example 1; Page 17; 72pp; Japanese.

peptide containing a CTL (cytocoxic T lymphocyte) epicope recognised by cytotoxic T cells and a protein containing the ATPade domain of a heat shock protein. Also described are: (1) a drug composition containing (1) as active ingredient; (2) a DNA encoding (1); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (1) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response inducer. The protein is useful as an active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against leukaemia. The present sequence represents a primer which is used in an example from the present invention

```
ATPase; Hsp70; heat shock protein; cytotoxic T lymphocyte; CTL; immune response; infectious disease; malaria; cytotoxic T cell; cytostatic; immunostimulant; cellular immune response inducer;
                                                                                                    Hsc70ATPase domain-PYE oligonucleotide primer SEQ ID NO:66.
                                                                                                                                                                     protozoacide; leukaemia; cancer; primer; ss.
                                                                                                                                                                                                                                                                                                                            (SUME ) SUMITOMO ELECTRIC IND CO.
                        AAA92216 standard; DNA; 24 BP
                                                                                                                                                                                                                                                                                                  99JP-00041535.
                                                                                                                                                                                                                                                                        18-FEB-2000; 2000WO-JP000941.
                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                      Shinbara N, Udono H,
                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-543748/49.
                                                                                                                                                                                                                       WO200049041-A1
                                                                                                                                                                                                                                                                                                  19-FEB-1999;
                                                                                                                                                                                                                                                24-AUG-2000.
                                                                            05-JAN-2001
                                                                                                                                                                                              Synthetic.
                                                   AAA92216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
            AAA9221
                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide containing a CTL (cytocoxic Tymphocyte) epitope recognised by cytocoxic T cells and a protein containing the ATPase domain of a heat shock protein. Also described are: (1) a drug composition containing (1) as active ingredient; (2) a DNA encoding (1); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the proteozoacide activities, and can be used as cellular immunes response inducer. The protein is useful as an active ingredient for drug malaria or cancer e.g. to provide systemic immunity against leukaemia. The present sequence represents a primer which is used in an example from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer.
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a fused protein (I) prepared from a
                                                                                                                                                                                                                                                                        ATPase; Hsp70; heat shock protein; cytotoxic T lymphocyte; CTL; immune response; infectious disease; malaria; cytotoxic T cell; cytostatic; immunostimulant; cellular immune response inducer; protozoacide; leukaemia; cancer; primer; ss.
                                                   ö
                       y Match 69.0%; Score 13.8; DB 3; Length 24; Local Similarity 76.5%; Pred. No. 2.1e+03; hes 13; Conservative 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 13.8; DB 3; Length 24;
Pred. No. 2.1e+03;
2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 24 BP; 6 A; 6 C; 6 G; 6 T; 0 U; 0 Other;
G; 6 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                 HBC70-PYE oligonucleotide primer SEQ ID NO:62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 16; 72pp; Japanese
                                                                             3 CGCAUGGCUAAGGGACC 19
                                                                                                    23
                                                                                                                                                                    AAA92212 standard; DNA; 24 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUME ) SUMITOMO ELECTRIC IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yui K;
                                                                                                                                                                                                                                                                                                                                                                                                                       18-FEB-2000; 2000WO-JP000941
                                                                                                                                                                                                                                                                                                                                                                                                                                               99JP-00041535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 69.0%;
1 Similarity 76.5%;
13; Conservative
A; 6 C; 6
                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Udono H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-543748/49.
 Sequence 24 BP; 6
                                                                                                                                                                                                                                                                                                                                                                   WO200049041-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                               19-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shinbara N,
                                                                                                                                                                                                                       05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                            24-AUG-2000
                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                               AAA92212;
                           Query Match
                                                                                                                                          Matches
                                                                             ò
                                                                                                    셤
```

Yui K;

```
ö
                                                                                                                                                 The present invention describes a fused protein (I) prepared from a peptide containing a CTL (cytotoxic T lymphocyte) epitope recognised by cytotoxic T cells and a protein containing the Arpase domain of a heat shock protein. Also described are: (I) a drug composition containing (I) as active ingredient; (2) a DNA encoding (I); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (I) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response inducer. The protein is useful as an active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against leukaemia. The present sequence represents a primer which is used in an example from
Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 13.8; DB 3; Length 24; Pred. No. 2.1e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oligonucleotide array; adapter sequence; probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 24 BP; 6 A; 6 C; 6 G; 6 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oligonucleotide adapter/capture probe 7875.
                                                                                                             Example 1; Page 16; 72pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABQ07884 standard; DNA; 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 CGCAUGGCUAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABQ07884;
```

ö

Gaps

.; 0

3 CGCAUGGCUAAGGGACC 19 CCCATGTCTAAGGGACC 23

Best Local Similarity

Matches

```
The invention relates to an oligonucleotide array (I) comprising at least different addresses (adapter sequences) with each comprising a different capture probe selected from a group consisting of the sequences given in ABQ00010-ABQ13409. (I) is useful for immobilising a target nucleic acid sequence by attaching a adapter nucleic acid (ABQ00010-ABQ13409) to a target nucleic acid to form a modified target nucleic acid and contacting the modified target nucleic acid with (I). The steps of above method is useful for detecting a target nucleic acid, which further comprises detecting the presence of the modified target nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 different addresses (adapter sequences) with each comprising a different capture probe selected from a group consisting of the sequences given in ABQ00010-ABQ13409. (I) suseful for immobilising a target nucleic acid sequence by attaching a adapter nucleic acid (ABQ00010-ABQ13409) to a target nucleic acid to form a modified target nucleic acid and contacting the modified target nucleic acid with (I). The steps of above method is useful for detecting a target nucleic acid, which further comprises detecting the presence of the modified target nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to an oligonucleotide array (I) comprising at least
             Array comprising adapter sequences useful for immobilizing or detecting target nucleic acid sequence, has different addresses comprising different specific capture probes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Array comprising adapter sequences useful for immobilizing or del
target nucleic acid sequence, has different addresses comprising
                                                                                                                                                                                                                                                                                                                                                                                                                 69.0%; Score 13.8; DB 6; Length 24; 82.4%; Pred. No. 2.1e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oligonucleotide array, adapter seguence; probe; ss.
                                                                                                                                                                                                                                                                                                                                                                        Sequence 24 BP; 8 A; 6 C; 7 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oligonucleotide adapter/capture probe 1940.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        target nucleic acid sequence, has different specific capture probes.
                                                                                                         Claim 1; Page 186; 261pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 90; 261pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-AUG-2000; 2000US-0228854P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-AUG-2001; 2001WO-US026519.
                                                                                                                                                                                                                                                                                                                                                                                                                                      1 Similarity 82.4%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGCAACGCTAAGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GCGCAUGGCUAAGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABQ01949 standard; DNA; 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ILLU-) ILLUMINA INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-292068/33
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200216649-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gunderson K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABQ01949;
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                           Array comprising adapter sequences useful for immobilizing or detecting a target nucleic acid sequence, has different addresses comprising different specific capture probes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an oligonucleotide array (I) comprising at least 25 different addresses (adapter sequences) with each comprising a different capture probe selected from a group consisting of the sequences given in AB000010-AB013409. (I) is useful for immobilising a target nucleic acid sequence by attaching a adapter nucleic acid (AB000010-AB013409) to a target nucleic acid to form a modified target nucleic acid and contacting the modified target nucleic acid with (I). The steps of above method is useful for detecting a target nucleic acid, which further comprises detecting the presence of the modified target nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oligonucleotide array; adapter sequence; probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 24 BP; 3 A; 7 C; 6 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 13.8; DB 6;
Pred. No. 2.1e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oligonucleotide adapter/capture probe 7834.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 186; 261pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18
                                                                                                                                                    27-AUG-2001; 2001WO-US026519
                                                                                                                                                                                             25-AUG-2000; 2000US-0227948P.
29-AUG-2000; 2000US-0228854P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69.0%;
82.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-AUG-2001; 2001WO-US026519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-AUG-2000; 2000US-0227948P.
29-AUG-2000; 2000US-0228854P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24 GCGCAACGCTAAGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABQ07843 standard; DNA; 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GCGCAUGGCUAAGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 82.4
es 14; Conservative
                                                                                                                                                                                                                                                               (ILLU-) ILLUMINA INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ILLU-) ILLUMINA INC
                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-292068/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-292068/33.
                                                             WO200216649-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200216649-A2.
                                                                                                                                                                                                                                                                                                           Gunderson K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-FEB-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gunderson K;
                                                                                                         28-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-JUN-2002
                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABQ07843
```

Matches

ઠે 셤

RESULT 13 ABQ07843

detecting a

ö

Gapa

ö

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence represents PCR primer used to isolate DNA encoding a glucagon-like peptide-1 (GLP-1) mutein. The invention relates to a method for treating type II diabetes mellitus, by administering a GLP-1 or a GLP in thein, particularly the mutein GLP-1-Gly8. The GLP-1 mutein is an insulinotropic peptide. The method is used to treat type II diabetes (non-insulin dependent diabetes mellitus) and obesity
                                                                                                                                                                                                                                                                                                                                 Glucagon-like peptide-1; GLP-1; mutein; type II diabetes mellitus; insulinotropic peptide; non-insulin dependent diabetes mellitus; obesity; therapy; PCR primer; ss.
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Treating type II diabetes mellitus and obesity using glucagon like peptide.
                                                             ..
                                                                                                                                                                                                                                                                                                     PCR primer for glucagon-like peptide-1 mutein coding sequence.
                            Query Match 69.0%; Score 13.8; DB 6; Length 24; Best Local Similarity 82.4%; Pred. No. 2.1e+03; Matches 14; Conservative 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 69.0%; Score 13.8; DB 3; Length 30; Best Local Similarity 82.4%; Pred. No. 2.2e+03; Matches 14; Conservative 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 30 BP; 8 A; 5 C; 12 G; 5 T; 0 U; 0 Other;
Sequence 24 BP; 8 A; 6 C; 7 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 4; Page 19; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MODE-) MODEX THERAPEUTIQUES SA
                                                                                                                      1 ścechacectaaegae 17
                                                                                            2 GCGCAUGGCUAAGGGAC 18
                                                                                                                                                                                                         AAZ31989 standard; DNA; 30 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0081562P.
99US-00081562.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-IB000651
                                                                                                                                                                                                                                                                      28-JAN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-013103/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-APR-1998;
12-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                               WO9953064-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Thorens B;
                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                        AAZ31989;
                                                                                                                                                                        ဇ္တ
                                                                                                                        셤
```

ö

Gaps

.. 0

Search completed: March 15, 2005, 16:13:05 Job time : 113.965 secs

ઠે 셤

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Minimum DB Maximum DB

Database

```
AC068282 Homo sapi
AC094522 Rattus no
AX012292 Sequence
AL035460 Human DNA
AC118386 Rattus no
G28378 Homo sapi
BC051288 Homo sapi
BC051288 Homo sapi
AC10286 Homo sapi
AC10286 Homo sapi
AC010392 Homo sapi
AC010392 Homo sapi
AC010392 Homo sapi
AC018409 Homo sapi
AC01861 Homo sapi
AC118260 Wus muscu
AC118260 Wus muscu
AC116837 Homo sapi
AC115837 Homo sapi
AC115837 Homo sapi
AC115837 Homo sapi
AC115837 Homo sapi
AC022102 Homo sapi
AC022102 Homo sapi
AC022102 Homo sapi
AC022102 Homo sapi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich,S., Lafontaine,D. and Perreault,J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERRENOVE (CA)

Location/Qualifiers

1. .57

/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 18; DB 6; Length 57;
Pred. No. 2.7e+02;
2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57 bp
Sequence 45 from Patent WO9955856.
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012282
Sequence 44 from Patent W09955856.
AX012282
AX012282.1 GI:9998343
                                                               AX012292
HS860F19
AC118386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC118260
AC016621
AC106858
                                                                                                                                                                                                                                                                                                                                                                                                                   AC090903
AC018409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC023652
CNS01DX0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 90.0%;
Best Local Similarity 88.9%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 cecaugecuaaeceacec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40 CGCATGGCTAAGGGACCC
      87.0 205342
87.0 251908
85.0 135005
85.0 135005
84.0 1466
84.0 22604
84.0 2262
84.0 120027
84.0 120027
84.0 145476
84.0 145426
84.0 145426
84.0 145426
84.0 145426
84.0 145426
84.0 158894
84.0 158894
84.0 158894
84.0 158894
84.0 158894
84.0 160709
84.0 160709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
AX012282
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
AX012283
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012283 Sequence
AX012285 Sequence
AX012286 Sequence
AX012289 Sequence
AX012289 Sequence
AX012289 Sequence
AX012294 Sequence
AX012294 Sequence
I05479 Sequence
I07993 Sequence
IX19993 Sequence
AX195940 Sequence
AX195940 Sequence
AX1928 Human prote
AX959240 Sequence
AX959240 Sequence
AX959340 Sequence
AX959340 Sequence
AX959340 Sequence
AX959340 Sequence
AX959340 Sequence
AX959340 Musa muscu
                                                                                                                                                                                                       March 15, 2005, 06:19:02; Search time 392.807 Seconds (without alignments) 2467.126 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012282 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                                    GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                       nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012282

AX012283

AX012286

AX012286

AX012288

AX01228

AX012290

AX012290

AX012290

AX012290

AX012290

AX012290

AX012294

AX012290

AX01220

AX0120

AX0120

AX0120

AX0120

A
                                                                                                                                                                                                                                                                                                                                                                                          ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                     US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     рВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90.0

90.0

90.0

90.0

90.0

90.0

90.0

90.0

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

87.0

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

11725

1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenEmbl:*
```

ö

AX012283.1 GI:9998344

DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

synthetic construct synthetic construct

AC113298 Mus muscu

AX959240 AF378903 AC115040 AC113298

444444444444

0 0 0 0 0 0 0 0

Score

Result õ

ORIGIN

ઠ 셤

```
ö
                                                                                                                                                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-NOV-1999;
ANANVORANICH SIRINET (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 50 04-NOV-1999;
ANANVORANICH SIRINATOR (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                              Gaps
                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                        90.0%; Score 18; DB 6; Length 57; 88.9%; Pred. No. 2.7e+02; ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90.0%; Score 18; DB 6; Length 57;
88.9%; Pred; No. 2.7e+02;
winmarrhes 0; Indels
                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/note="synthetic nucleic acid"
              1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_tse="saxon:35330"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 50 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                 Sequence 49 from Patent W09955856. AX012287
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                               3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                    40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                          AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90.0
Best Local Similarity 88.9
Matches 16; Conservative
                                                                                                                                                                            16; Conservative
                                                                                                                                                          Best Local Similarity
Matches 16; Conserv
                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                      RESULT 5
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: WO 9958856.A 47 04-NOV-1999;
PANANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Parent: Wo 995586-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Batent: WO 995586-A 45 04.NOV-1999;

ANANVORANCH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 90.0%; Score 18; DB 6; Length 57; Best Local Similarity 88.9%; Pred. No. 2.7e+02; Matches 16; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                 90.0%; Score 18; DB 6; Length 57; 88.9%; Pred. No. 2.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                         1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012285 57 bp
Sequence 47 from Patent WO9958856.
AX012285 AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012286 57 bp
Sequence 48 from Patent WO9955856.
AX012286
                                                                                                                                                                                                                                                                                                                                                             40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                         CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 88.9
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
AX012286
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
```

ORIGIN

셤

셤

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 18-FEB-2000
                                                                                                                                                                                                                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 46 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 02-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 11725)
Garner, I., Cottingham, I.R., Temperley, S.M., Foster, D.C., Sprecher, C.A. and Prunkard, D.B.
Protein C production in non-human transgenic mammals Patent: US 595185-A 1 18-MAY-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 87.0%; Score 17.4; DB 6; Length 11725; Best Local Similarity 89.5%; Pred. No. 3.3e+02; Matches 17; Conservative 1; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 57;
                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.0%; Score 17.4; DB 6;
84.2%; Pred. No. 5.5e+02;
iive 2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                    1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon.32630"
/note="synthetic nucleic acid"
                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                  other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11725 bp
Sequence 13 from Patent EP 0266190.
105479
105479.1 GI:591032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1 from patent US 5905185.
                                                                                AX012284 57 bp
Sequence 46 from Patent WO9955856.
AX012284
                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39 GGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGCGCAUGGCUAAGGGACC 19
40 CGCATGGCTAAGGGACCC 57
                                                                                                                                 AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR070467.1 GI:7221355
                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 84.21
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AR070467/c
                                                                                                                                                                                 ORGANISM
                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
I05479/c
                                                                  AX012284
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           쉽
                                                 ö
                                                                                                                                                                                                  PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 51 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Parant: W0 995586-A 52 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
               Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 90.0%; Score 18; DB 6; Length 57; Best Local Similarity 88.9%; Pred. No. 2.7e+02; Matches 16; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 90.0%; Score 18; DB 6; Length 57; Best Local Similarity 88.9%; Pred. No. 2.7e+02; Matches 16; Conservative 2; Mismatches 0; Indels
                                               0; Indels
                                                                                                                                                                                                    linear
            Score 18; DB 6; I
Pred. No. 2.7e+02;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon.32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                    other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX012290 57 bp
Sequence 52 from Patent W09955856.
AX012290 GI:9998351
                                                                                                                                                                                        AX012289 57 bp
Sequence 51 from Patent WO9955856.
AX012289
                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                20
                                                                                                  40 CGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                 AX012289.1 GI:9998350
              90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40 CGCATGGCTAAGGGACCC
                                                                                3 CGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
          Query Match
Best Local Similarity 88.9
Matches 16; Conservative
                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                               RESULT 7
AX012289
LOCUS
                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
AX012290
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

ò 셤 ö

Gaps

ö

Bource

ORIGIN

JOURNAL FEATURES

ORGANISM

SOURCE

REFERENCE

AUTHORS

TITLE

```
SELBELRHSSLERRCIEBICDFEBAKEIFQNVDDTLAFWSKHVDGDQCLVLPLEHPCA
SLCCGHGTCIDGIGSFSCDCRSGWEGRFCQREVSFLNCSLDNGGCTHYCLEBYGWRRC
SCAPGYKLGDDLLQCHRAYKFPCGRPWRMBKKKSHLKRDTEDGEDQVDPRLIDGKMT
RRGDSPWQVDLLDSKKKLACGAVLIHPSWVLTAAHCMDESKKLLVRLGSFWEKW
BLDLDIKEVFHPWYSKSTTDNDIALLHLAQPATLSQTIVPICLPDSGLABRELNQAG
GETLVTGWGYHSSREKEAKRNRTFVLNFIKIPVVPHNECSEVMSNMVSENMLCAGILG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI 08-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 translation="MWQLTSLLLFVATWGISGTPAPLDSVFSSSERAHQVLRIRKRAN
                                                                                                                                                               PAT 20-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source text: Human DNA, clones PC-lambda-8 and PC-lamda-6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 11725)
1 (bases 1 to 11725)
The nucleotide sequence of the gene for human protein C Proc. Natl. Acad. Sci. U.S.A. 82 (14), 4673-4677 (1985) 85270300
                                                                                                                                                                                                                                                                     Unknown.
Unclassified.
Unclassified.
1 (bases 1 to 11725)
Lander, B.S., Daley, G.Q., Cargill, M., Ireland, J.S. and Rozen, S.G.
Coding sequence polymorphisms in vascular pathology genes
Patent: US 6692999-A 31 17-PBB-2004;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jun(2131. .2200,3464. .3630,5093. .5117,5210. .5347,5450. .5584,8253. .8395,9269. .9386,10516. .11105)
/code="Protein C" /code grart=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M11228.1 GI:190333
glycoprotein; protease; protein C; serine protease.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 17.4; DB 6;
Pred. No. 3.3e+02;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                         Sequence 31 from patent US 6692909.
AR474619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMPRCA 11725 bp I
Human protein C gene, complete cds.
M11228
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .11725
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/map="2413-q21"
join(2131 .2200,3464 .36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAA60166.1"
/db_xref="G1:190334"
                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                      AR474619.1 GI:42713733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 89.55
Matches 17; Conservative
 Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Original
                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                             RESULT 14
AR474619/c
                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
HUMPRCA/c
                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                       ò
                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 11725)
Kurachi, K. and Kurachi, S.
Nucleotide sequences for gene regulation and methods of use thereof
Patent: US 6610906-A 50 26-AUG-2003;
Location/Qualifiers
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 02-DEC-1994
                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87.0%; Score 17.4; DB 6; Length 11725; 89.5%; Pred. No. 3.3e+02;
                                                                                                                                                                                                                                           Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 11725)
Murray,M.J., Berkner,K.L., Foster,D.C. and Davie,E.W.
Expression of protein Care Patent: 80 (215548-A1 1 25-MAR-1987;
Location/Qualifiers
                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                  Unclassified.

1 (bases 1 to 11725)

1 (bases 1 to 11725)

Expeter). Murray,M.J. and Berkner, K.L.

Expression of protein C

Patent: EP 0266190-A2 13 04-MAY-1988;

Location (Qualifiers
                                                                                                                                                                                                                                         Query Match 87.0%; Score 17.4; DB 6; Best Local Similarity 89.5%; Pred. No. 3.38+02; Matches 17; Conservative 1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 17.4; DB 6;
Pred. No. 3.3e+02;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR390800 11725 bp C
Sequence 50 from patent US 6610906.
AR390800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="unassigned DNA"
                                                                                                                                                                                    /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                              107993 11725 bp 262quence 1 from Patent EP 0215548. 107993.1 GI:589294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .11725
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="unknown"
                                                                                                                                                                    /organism="unknown"
                                                                                                                                                                                                                                                                                                                                     877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR390800.1 GI:40113147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 89.5%;
Matches 17; Conservative 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                        Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
```

source

ORIGIN

JOURNAL FEATURES

TITLE

DEFINITION ACCESSION VERSION

RESULT 12 I07993/c LOCUS

셤

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE ORGANISM

source

ORIGIN

PEATURES

TITLE JOURNAL

REFERENCE AUTHORS

AR390800/c LOCUS DEFINITION

RESULT 13

셤

ö

Gaps

ö

us-09-699-667e-64.std.rge

```
DRQDACEGDSGGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDWIHGHIR
DKEAPQKSWAP"
join(3131. . . .2200,3464. . .3519)
/note="Protein C signal peptide"
join(3520. . .3630,5093. . .317,5210. . .5347,5450. . .5584,
8253. . 8395,9269. . .9386,10516. . .11102)
/product="unnamed"
2131. . .2200
/gene="PROC"
/gene="PROC"
/gene="PROC"
/note="PROC"
/note="Proc cds intron A"
/number=2
3631. . .509
/note="Proc cds intron B"
5093. . .317
/number=3
5118. .520
/note="Proc cds intron C"
5210. . .5347
/number=4
5148. .5249
/note="Proc cds intron D"
5210. . .5347
/number=4
5348. . .5449
/note="Proc cds intron D"
5450. . .5584
/number=5
5450. . .5584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number=8
575 bp upstream of StuI site; chromosome 2q14-q21.
                                                                                                                                                                                                                                                                                                                                                                  sig_peptide
                                                      mat_peptide
                                                                                                                                                                                                                                                                   intron
                                                                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                             exon
                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                exon
                                                                                            gene
                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
```

a ઠે

Query Match 87.0%; Score 17.4; DB 9; Length 11725; Best Local Similarity 89.5%; Pred. No. 3.3e+02; Matches 17; Conservative 1; Mismatches 1; Indels 0;

ô

Gaps ö

Search completed: March 15, 2005, 12:35:06 Job time : 397.807 secs

THIS PAGE BLANK (USPTO)

AI124043 qa94g11.8

1 AI124043

```
46
60.0
12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AZ876899 2M0192C06
A1316323 u199bl2.y
AL763075 Arabidops
BM394673 50072-2-5
BM395141 50072-2-7
BX897261 Arabidops
BX2972021 Arabidops
AU102715 AU102714
AU102715 AU102715
AU102715 AU102716
AU102715 AU102718
BM393985 50072-2-1
AL940566 Arabidops
CL211870 W084904
AZ919092 1006013H0
AZ8140566 Arabidops
CL227505 1RU40D12
CR183540 FOrward 8
CL983097 GC0336 T1
AZ817621 AM008711
AZ817621 AM008712
CCC020441 3591 T1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidops
2M0192C06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM395243 50072-2-8
                                                                                          March 15, 2005, 15:20:59 ; Search time 804.561 Seconds (without alignments) 946.212 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                          241816
            GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                              34239544 segs, 19032134700 residues
                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                  nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM395243
BX291147
A1316223
A1316223
AL763075
BM395141
BX897761
BX897761
BX897761
BX897761
AU102714
AU102714
AU102714
AU102718
AU393985
AC219999
CC1983997
CC1983997
CC1983997
                                                                                                                                                                              1 ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                      IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                            US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                            9b eet1:

9b httc:

9b eet3:

9b eet4:

9b eet6:

9b eet6:

9b eet6:

9b eet6:
                                                                                                                                                                                                                                                                                                    seq length: 0
seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                  EST:*
                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                  Minimum DB e
Maximum DB e
                                                                  OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                               Searched:
                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0000
```

AU102253 AU103253 AU102254 AU103254 AU103255 AU103255 AU103255 AU103256 AU103257 AU103256 AU103259 AU103259 AU103259 AU103259 AU103260 AU103260 AU103261 AU103264 AU103262 AU103264 AU103265 AU103265 AU103265 AU103265 AU103267 AU103269 AU103269 AU103269 AU103269 AU103269 AU103270 AU103269 AU103270 AU103269 AU103270 AU103269 AU103270 AU103269	BM395243  BM395243  Tetrahymena thermophila cDNA, mRNA sequence. BM395243.1 GI:18195296  EST. Tetrahymena thermophila cDNA, mRNA sequence. BM395243.1 GI:18195296  EST. Tetrahymena thermophila Tetrahymena thermophila  Bukaryota; Alveolata; Clijophora; Oligohymenophorea; Hymenostomatida; Tetrahymenina; Tetrahymena. Hymenostomatida; Tetrahymenina; Tetrahymena. Turkewitz, Alveolata; Clijophora; Oligohymenophorea; Hymenostomatida; Tetrahymena thermophila  ENARYOTA; Alveolata; Clijophora; Oligohymenophorea; Hymenostomatida; Tetrahymena thermophila, strain CU428.1, growing cells Unpublished (2002) Contact: Turkewitz AP  Molecular Genefics and Cell Biology University of Chicago University of Chicago, IL 60637, USA  Fex: 773 702 4174  Anti	.6; DB 4; Length 27; . 3.3e+04; tches 4; Indels 0; Gaps 0;
AU103254 AU103255 AU103255 AU103255 AU103250 AU103260 AU103260 AU103260 AU103260 AU103260 AU103260 AU103260 AU103260 AU103260 AU103271 AU103260	BM395243  S0072-2-8-B11.r.1 Chilocat/Turkewitz CDP THEORYMENA HERMOPHIA CDNA, MRNA SEQUE BM395243.1 GI:18195296  EST.  Tetrahymena thermophila Tobase 1 to 27) TurkewitzA.P. Karrer.K.M., Jahn,C., Or TurkewitzA.P. Karrer.K.M., Jahn,C., Or Tetrahymena thermophila, strair Unpublished (2002) Contact: Turkewitz AP Molecular Genetics and Cell Biology University of Chicago University of Chicago University of Chicago Tel: 773 702 4374 Fax: 773 702 4374 Fax: 773 702 4374  Location/Qualifiers I. 27 /organism="Tetrahymena thermoph/mol type="mRRA" /gtrain="CU42811" /db xref="texon:5911" /db xref="tex	Score 13 Pred. No ; Misma 20 24
напапапапапапапапапапапапапапапапапапап	OCH DODA DODA DODA DODA DODA DODA DODA DOD	0 %; 0 %; 0 %; 0 %;
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	BM395243  50072-2-8-B11.r.1 Chilocat/ Tetrahymena thermophila cDN BM395243.1 GI:18195296 BEST. Tetrahymena thermophila Turkewitz.A.P. Karrer.K.M. Frankel.J. and Klobutcher,L Molecular Genetics and Cell University of Chicago 200 E. Seth Street, Chicago 20 E. Seth Street, Chicago Tel. 773 702 4374 Fax: 773 702 4374 Fax	imilarity 70.0%; conservative 2 GGGGANGGCUAAGGGACCC
	13. 44.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3 3. 4.3	Similarity 4; Conser GGCGCAUGG
••••••••••••••••••••••••••••••••••••••	BM39524 50072-5 50072-5 50072-5 BM39524 BM39524 BEST. Turkevi Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hymeno Hym	.m.i.n co 606 606
	BM3 5000 5000 5000 6000 6000 6000 6000 600	11 Si 14; 1 G
00000000000000000000000000000000000000	RESULT 1 BM395243 LOCUS DEFINITION ACCESSION VERSTON KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT COMMENT PRATURES BOULCE	Query Match Best Local S Matches 14 Qy 1 Db 5

SOURCE

AUTHORS TITLE

REFERENCE

REFERENCE AUTHORS

PUBMED

JOURNAL MEDLINE

REFERENCE AUTHORS

JOURNAL PUBMED REFERENCE AUTHORS JOURNAL

TITLE

COMMENT

TITLE

MEDLINE PUBMED

JOURNAL

TITLE

DEFINITION

BX291747

ACCESSION

VERSION KEYWORDS

```
(http://www.jax.org/resources/documents/dnares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end repaired with T4 DNA polymerase and T4 polymucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoreais. Vector DNA was prepared from a derivative of pwD42 (gij473214 gbp hR129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into
                                                                                                                    AZ876899 34 bp DNA linear GSS 21-FEB-2001
2M0192C06F Mouse 10kb plasmid UUGCIM library Mus musculus genomic
clone UUGC2M0192C06 F, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chemically-competent B. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus. 1 (bases 1 to 34)
Dunn, A oyagi, Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Moderandern, A. and Wright, D., Weise, R. Mouse whole genome scaffolding with paired end reads from 10kb plasmid innerts
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, 84112, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="E. Coli strain XL10-Gold, T1-resistant, F-" /clone lib="Mouse 10kb plasmid UUGCIM library" /note="Wector: PWD42ry; Purified genomic DNA from M. musculus C57BL/6J (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64.0%; Score 12.8; DB 8; illarity 75.0%; Pred. No. 8.5e+04; Conservative 2; Mismatches 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0192 row: C column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Laboratory Mouse DNA Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: 0192 row: C column: 06
Seg primer: CGTTGTAAAACGACGGCCAGT
Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
/clone="UUGC2M0192C06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 34.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                            AZ876899
AZ876899.1 GI:13088195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GCGCAUGGCUAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . .34
                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
nes 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                  RESULT 3
AZ876899
                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S Striatov, N., Li, Y., Rosso, M.G. and Weisshaar, B.

S Striatov, N., Li, Y., Rosso, M.G. and Weisshaar, B.

S Striatov, N., Li, Y., Rosso, M.G. and Weisshaar, B.

Direct Submission

L Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer
Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer

Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer

Tuestungeforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany

This sequence has been recovered from the left border of the T-DNA.

It indicates an insertion within the locus defined by BAC clone

MTH12. Details on the protocols used for generation of the sequences are described in References 1-3. The sequences are generated at the MPI for Plant Breeding Research in the Context of the GABI-Kat project. GABI-Kat is part of the German Plant Genomics program designated 'GABI-Kat is part of the German Plant Genomics program at: http://www.mpiz-koeln.mgg.de/GABI-Kat/.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     fincter PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from vector pACIG1 (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion.
Arabidopsis thaliana T-DNA flanking sequence GK-467C08-019014, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                            Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots; rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                       Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosso, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    th 68.0%; Score 13.6; DB 9; Length 51; Similarity 75.0%; Pred. No. 3.6e+04; Schopervative 1; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       I-DNA derived sequences were removed."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Arabidopsis thaliana"
/mol_type="genomic DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bioinformatics 19 (11), 1441-1442 (2003)
22755829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:3702"
/clone="GK-467C08-019014"
                                                                                                                                                                                                                               Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 gececaugecuaageaccc 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ecotype="Col-0"
                                                                                                                                                             BX291747.1 GI:28890743
                                                                                                                                                                                                                                                                 Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14756321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14682050
                                                                                                                                                                                                 GSS
```

10 GTGCATGGGTAAGGGA 25

g

22 GGCGAAGGGCTATGGGATCC 41

g à

Query Match

Best Loca Matches

source

FEATURES

```
genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                    thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14756321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14682050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                            ACCESSION
                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/mol type="maxna"
/db_xref="taxon:10090"
/db_xref="taxon:10090"
/clone="IMAGE:1958015"
/tisaue type="colon cancer"
/cell Inse="colon cancer cell line MAC13"
/cell Inse="sola"
/cell Inse="sola"
/colone lib="sola"
/clone lib="sola"
/colone lib="so
                                                                                                                       AI316323 40 bp mRNA linear EST 17-DEC-1998 uj99b12.yl Schiller mouse MAC13 Mus musculus cDNA clone IMAGE:1958015 5' similar to TR:035934 O35934 CLN3. ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5'-AATTCGGCACGAG-3'. The library was size-selected and when through one round of amplification. Average insert size is 1.7 kb, with a range from 0.4-12 kb. This library was constructed by Dr. Martin Schiller (Johns Hopkins
                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (Dases I to 40)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Gelsel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSS 01-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL763075 40 bp DNA linear GSS 01-APR
Arabidopsis thaliana T-DNA flanking sequence GK-032C06-014864,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Putative full length read vector to vector length is 631 Possible reversed clone: similarity on wrong strand Seq primer: -40RP from Glbco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64.0%; Score 12.8; DB 1; 75.0%; Pred. No. 8.7e+04; iive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      University). "
                                                                                                                                                                                                                                                                                               AI316323.1 GI:4031590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 GAGCATGGCTTAGGGA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 75.0
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .40
                                                                                                                                                                                                                                                                                                                                                                                                    musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGI:984355
                                                                                                                                                                                                                                   ведиенсе.
                                                                                                                                                                                                                                                                   AI316323
                                                                                                                                                                                                                                                                                                                                                                                                    Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ~
                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                           RESULT 4
AI316323/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
AL763075
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
```

```
Strizhov, N., Rosso, M.G., Li, Y. and Weisshaar, B..

Strizhov, N., Rosso, M.G., Li, Y. and Weisshaar, B..

Direct Submission

L. Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer

Succhtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany

This sequence has been recovered from the left border of the T-DNA.

It indicates an insertion close to or within gene At2g21630.

Details on the protocols used for generation of the sequence are

described in References 1-3. The sequences are generated at the MPI

for Plant Breeding Research in the context of the GABI-Kat project

GABI-Kat is part of the German Plant Genomics program designated

'GABI-K Information on line availability can be found at:

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Weisshaar, B.
An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics
Planking sequence tag-based reverse 2003)
23117147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cocype="Col" | Accorpge="Col" | Accorpg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                             Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:3702"
/clone="GK-032C06-014864"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                              Spermatophyta, Magnollophyta, eudicotyledons, core eudicots, rosids, eurosids II; Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosso, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64.0%; Score 12.8; DB 9; Length 40; 75.0%; Pred. No. 8.7e+04; ive 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Arabidopsis thaliana"
/mol type="genomic DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bioinformatics 19 (11), 1441-1442 (2003)
22755829
                                                                                                                            Arabidopsis thaliana (thale cress)
AL763075.1 GI:21511171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25 CATGGCTATGGGATCC 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S CAUGGCUAAGGGACCC 20
                                                                                                                                                                              Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 40)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 75.0
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Weisshaar, B.
```

o

RESULT

DEFINITION

```
/db xref="taxon:3702"
                 'strain="CU428.1"
/mol_type="mRNA"
                                                                                                                                                                                                                                         2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                          7 gcgcarggaracraggccc 25
                                                                                                                                                                                                                                                                                                                                                                                                          yenomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                        BX897261.1 GI:39929756
                                                                                                                                                                                                     Conservative
                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Weisshaar, B
                                                                                                                                                                                                                                                            ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22755829
12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14682050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14756321
                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSS
                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                   RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                      BX897261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50072-2-7-G01.r.1 Chilcoat/Turkewitz cDNA (large fraction)
Tetrahymena thermophila cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Alveolata; Ciliophora; Oligohymenophorea; Hymenostomatida; Tetrahymenina; Tetrahymenidae; Tetrahymenia.

El (Dases I to 27)

S Turkewitz,A.P., Karrer,K.M., Jahn,C., Orias,E., Kirk,K.E., Frankel,J. and Klobutcher,L.

EST from Tetrahymena thermophila, strain CU428.1, growing cells Unpublished (2002)

Londact: Turkewitz AP Molecular Genetics and Cell Biology University of Chicago

Diversity of Chicago

Diversity of Chicago

Esth Street, Chicago, IL 60637, USA

Tel: 773 702 4374

Fax: 773 702 3172
                 BM394673 23 bp mRNA linear BST 17-JAN-2002 50072-2-5-D08.r.1 Chilcoat/Turkewitz cDNA (large fraction) Tetrahymena thermophila cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:5911"
/clone lib="Chilcoat/Turkewitz cDNA (large fraction)"
/note="Vector: BlueScript2 SK+; Details on library
preparation can be found in Chilcoat and Turkewitz (2001)
Proc. Natl. Acad. Sci USA, 98: 8709-8713."
                                                                                                                                                         Eukaryota; Alveolata; Ciliophora; Oligohymenophorea; Bukaryota; Alveolata; Ciliophora; Oligohymenophorea; Hymenostomatida; Tetrahymenina; Tetrahymenidae; Tetrahymena.

Turkewitz, A.P., Karrer, K.M., Jahn, C., Orias, E., Kirk, K.E., Frankel, J. and Klobutcher, L.

EST from Tetrahymena thermophila, strain CU428.1, growing cells Unpublished (2002)

Contact: Turkewitz AP

Molecular Genetics and Cell Biology
University of Chicas, Chicago, IL 60637, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63.0%; Score 12.6; DB 4; Length 23; 68.4%; Pred. No. 1e+05; ive 2; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Tetrahymena thermophila"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Tetrahymena thermophila"
                                                                                                                                                                                                                                                                                                                                                                                                        Email: apturkew@midway.uchicago.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: apturkew@midway.uchicago.edu
                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: T3.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="CU428.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GCGCATGGGTCCGGGCCCC 20
                                                                                          BM394673.1 GI:18194726
                                                                                                                              Petrahymena thermophila
                                                                                                                                                 Cetrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM395141.1 GI:18195194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Petrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tetrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Conservative
                                                                                                                                                                                                                                                                                                                                                                    Tel: 773 702 4374
Fax: 773 702 3172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: T3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local
                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                  DEFINITION
                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                        ACCESSION
                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
BM395141
BM394673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
```

```
Submitted (31-MAR.2004) Weisshaar B., Max-Planck-Institut fuer Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany This sequence has been recovered from the left border of the T-DNA. It indicates an insertion within the locus defined by BAC clone requence are described in References 1.3. The sequences are described in References 1.3. The sequences are described in References 1.3. The sequences the MPI for Plant Breeding Research in the context of the GABI-Kat project. GABI-Kat is part of the German Plant Genomics program designated GABI. Information on line availability can be found at: http://www.mpiz.koeln.mpg.de/GABI-Kat/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Weisshaar, J., J., Meisshaar, B., Meisshaar, Meisshaar, B., Meisshaar, B.
An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics
Plank Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana T-DNA flanking sequence GK-765D01-023592,
/db_xref="taxon:5911"
/clone lib="Chilcoat/Turkewitz cDNA (large fraction)"
/clone lib="Chilcoat/Turkewitz SK+; Details on library
preparation can be found in Chilcoat and Turkewitz (2001)
Proc. Natl. Acad. Sci USA, 98: 8709-8713."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. B. MaBI.Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rosso, M.G., Li, Y., Strizhov, N., Reiss, B., Dekker, K. and
                                                                                                                                                                                                                                                                         4; Length 27;
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 (bases 1 to 42)
Rosso,M.G., Strizhov,N., Li,Y. and Weisshaar,B.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .42
/organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bioinformatics 19 (11), 1441-1442 (2003)
                                                                                                                                                                                                                                                                     63.0%; Score 12.6; DB 4 68.4%; Pred. No. 1e+05; iive 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic_DNA"
/strain="Columbia 0"
```

```
Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer Suechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany This sequence has been recovered from the left border of the T-DNA. It indicates an insertion within the locus defined by BAC clone are described in References 1-3. The sequences are generated at the MPI for Plant Breeding Research in the context of the GABI-Kat project. GABI-Kat is part of the German Plant Genomics program designated 'GABI'. Information on line availability can be found at: http://www.mpiz-koeln.mpg.de/GABI-Kat/.
                                                                        Inotes PCR was performed on DNA from Arabidopsis thaliana plants (TI) which were transformed with the T-DNA from vector pAC16 I (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Weisshaar,B.
An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for
flanking sequence tag-based reverse genetics
Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BX292021 46 bp DNA linear GSS 02-APR-2004 Arabidopsis thaliana T-DNA flanking sequence GK-450B01-019252,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis
/clone="GK-765D01-023592"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BloTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li,Y., Strizhov,N., Reiss,B., Dekker,K. and
                                                                                                                                                                                                                                                                                                                      63.0%; Score 12.6; DB 9; Length 42; 68.4%; Pred. No. 1.1e+05;
                                                                                                                                                                                                                                                                                                                                                                           4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 (bases 1 to 46)
Li,Y., Rosso,M.G., Strizhov,N. and Weisshaar,B.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bioinformatics 19 (11), 1441-1442 (2003)
                                                                                                                                                                                                                                                                                                                                                                           2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arabidopsis thaliana (thale cress)
                                                    /ecotype="Col-0"
                                                                                                                                                                                                                                                                                                                                                                                                                               2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 GCCCATGCCTATGGGATCC 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX292021.1 GI:28891017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROBBO, M.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22755829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4756321
                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
BX292021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
/note="PCR was performed on DNA from Arabidopsis thaliana plants (TI) which were transformed with the T-DNA from vector pAC161 (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment (s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed.
                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50 bp mRNA linear EST 28-JAN-2004 AU102714 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone CASO2037, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Suzuki,Y., Yoshitomo-Nakagawa,K., Maruyama,K., Suyama,A. and Sugano,S. Construction and characterization of a full length-enriched and a 5'-end-enriched cDNA library. Gene 200 (1-2),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.

1 (basea 1 to 50)

Suzuki, Y., Taira, H., Tsunoda, T., Mizushima-Sugano, J., Sese, J., Hata, H., Ota, T., Isogai, T., Tanaka, T., Morishita, S., Okubo, K., Sakaki, Y., Nakamura, Y., Suyama, A. and Sugano, S.

Diverse transcriptional initiation revealed by fine, large-scale mapping of mRNA start sites

EMBO Rep. 2 (5), 388-393 (2001)
/mol_type="genomic DNA"
/strain="Columbia 0"
/db_xref="teaxon:3702"
/clone="GK-450B01-019252"
/clone="GK-A5D01-019252"
/clone lib="Arabidopsis thaliana T-DNA insertion lines"
/ecotype="Col-0"
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gape
                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Institute of Medical Science, University of Tokyo 4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan Email: ysuzuki@ims.u-tokyo.ac.jp
                                                                                                                                                                                                                                                                                                                           Length 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 50;
                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63.0%; Score 12.6; DB 1; 73.7%; Pred. No. 1.1e+05; ive 1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                         Score 12.6; DB 9;
Pred. No. 1.1e+05;
2; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .50
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                         1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 GGCGGTTGGCTATGGGATC 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AU102714.1 GI:13552235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Yutaka Suzuki
                                                                                                                                                                                                                                                                                                                         63.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department of Virology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                   13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                149-156 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AU102714/c
                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
```

RESULT 11

/organism="Arabidopsis thaliana"

Bource

FEATURES

ò

```
אטטבעונו אתראבער 50 bp mRNA linear EST 28-JAN-2004
AU102718 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone
KATOG0130, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Bmail: ysuzuki@ims.u-cokyo.ac.jp
Suzuki,Y., Yoshitomo-Nakagawa,K., Maruyama,K., Suyama,A. and
Sugano,S. Construction and characterization of a full
length-enriched and a 5'-end-enriched cDNA library. Gene 200 (1-2),
149-156 (1997).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 17-JAN-2002
Suzuki,Y., Yoshitomo-Nakagawa,K., Maruyama,K., Suyama,A. and
Sugano,S. Construction and characterization of a full
length-enriched and a 5'-end-enriched cDNA library. Gene 200 (1-2),
149-156 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryora, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi; Mammalia; Butheria, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 50)

Suzuki, Y., Taira, H., Tsunoda, T., Mizushima-Sugano, J., Sese, J., Hata, H., Ota, T., Isogai, T., Tanaka, T., Morishita, S., Okubo, K., Sakaki, Y., Nakamura, Y., Suyama, A. and Sugano, S.

Diverse transcriptional initiation revealed by fine, large-scale mapping of mRNA start sites

EMBO Rep. 2 (5), 388-393 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                            1. .50
/organism="Homo sapiens"
/mol_type="mRNA"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="KATO1595"
/clone_lib="Sugano Homo sapiens cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_11b="KAT06130"
/clone_lib="Sugano Homo sapiens cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 50;
                                                                                                                                                                                                                                                                                                                                                                                                         Length 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                         Score 12.6; DB 1;
Pred. No. 1.1e+05;
1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 63.0%; Score 12.6; DB 1; Best Local Similarity 73.7%; Pred. No. 1.1e+05; Matches 14; Conservative 1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .50
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50 GGCCCATGGCGACGGGTCC 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 GGCCCATGGCGACGGGTCC 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AU102718.1 GI:1355239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Yutaka Suzuki
                                                                                                                                                                                                                                                                                                                                                                                                               63.0%;
73.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 73.73
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM393985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21270072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
AU102718/c
LOCUS
                                                                                                                                                                      Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
BM393985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp
Suzuki.X., Yoshitomo-Nakagawa.K., Maruyama,K., Suyama,A. and
Sugano,S. Construction and charatcerization of a full
length-enriched and a S'-end-enriched cDNA library. Gene 200 (1-2),
149-156 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AU102717 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone KAT01595, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                         AU102715 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone CAS08445, mRNA sequence.
                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 50). 1 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Makaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Euthoria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 50)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Suzuki,Y., Taira,H., TBunoda,T., Mizushima-Sugano,J., Sese,J., Hata,H., Ota,T., Isogai,T., Tanaka,T., Morishtra,S., Okubo,K., Sakaki,Y., Nakamura,Y., Suyama,A. and Sugano,S.
Diverse transcriptional initiation revealed by fine, large-scale mapping of mRNA start sites
EMBO Rep. 2 (5), 388-393 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone lib="Sugano Homo sapiens cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuuxuki@ims.u-tokyo.ac.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 73.7%; Pred. No. 1.1e+05;
Matches 14; Conservative 1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CAS08445"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42 GGCCCATGGCGACGGGTCC 24
                                                                                                                                                                      AU102715.1 GI:13552236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AU102717.1 GI:13552238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Yutaka Suzuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                            AU102715
                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AU102717/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                               LOCUS
               4U102715/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
COMMENT
                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
```

FEATURES

ORIGIN

ઠ 셤

TITLE

ö

TITLE

COMMENT

us-09-699-667e-64.siz.rst

```
Search completed: March 15, 2005, 20:38:15 Job time : 807.561 secs
                                                                                    JOURNAL
PUBMED
    AUTHORS
                                                                                                                                                      AUTHORS
                                                                                                                                                                                            JOURNAL
                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                            TITLE
                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Weisshaar, L., ouriznov,N., Reiss,B., Dekker,K. and An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003) 14756321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSS 01-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xrefe"taxon:5911"
/clone lib="Chilcoat/Turkewitz cDNA (large fraction)"
/note="Vector: BlueScript2 SK+; Details on library
preparation can be found in Chilcoat and Turkewitz (2001)
Proc. Natl. Acad. Sci USA, 98: 8709-8713."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                           Turkewitz, A.P., Karrer, K.M., Jahn, C., Orias, E., Kirk, K.E., Frankel, J. and Klobutcher, L.
Frankel, J. and Klobutcher, L.
BST from Tetrahymena thermophila, strain CU428.1, growing cells Unpublished (2002)
Contact: Turkewitz AP
Molecular Genetics and Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL940566 54 bp DNA linear GSS 01-APF
Arabidopsis thaliana T-DNA flanking sequence GK-249D07-014444,
                                                                                                                                                                          Tetrahymenina; Tetrahymenidae; Tetrahymena.
50072-2-12-C08.r.1 Chilcoat/Turkewitz cDNA (large fraction) Tetrahymena thermophila cDNA, mRNA sequence.
BM393985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                           Eukaryota; Alveolata; Ciliophora; Oligohymenophorea;
Hymenostomatida; Tetrahymenina; Tetrahymenidae: Tetr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 63.0%; Score 12.6; DB 4; Length 52;
1 Similarity 68.4%; Pred. No. 1.1e+05;
13; Conservative 2; Mismatches 4; Indels

    .52
/organism="Tetrahymena thermophila"

                                                                                                                                                                                                                                                                                                                                          University of Chicago
920 E. 58th Street, Chicago, IL 60637, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bioinformatics 19 (11), 1441-1442 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                Email: apturkew@midway.uchicago.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/strain="CU428.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9 GCGAATGGGTACGGGCCCC 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            genomic survey sequence.
                                                                  BM393985.1 GI:18194038
                                                                                                                                Tetrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AL940566.1 GI:24397015
                                                                                                                                                                                          1 (bases 1 to 52)
Turkewitz, A.P., Ka
                                                                                                                                                                                                                                                                                                                                                                                    Tel: 773 702 4374
Fax: 773 702 3172
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: T3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22755829
12874060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
  DEFINITION
                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
AL940566
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
                                            ACCESSION
                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany This sequence has been recovered from the left border of the T-DNA. It indicates an innertion close to or within gene Ar2g34400.

Details on the protocols used for generation of the sequence are described in References 1-3. The sequences are generated at the MPI for Plant Breeding Research in the context of the GABI-Kat project. GABI-Kat is part of the German Plant Genomics program designated http://www.mpiz-koeln.mpg.de/GABI-Kat/.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from vector pAC161 (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:3702"
/clone="GK-249D07-014444"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                               Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
Strizhov, N., Li, Y., Rosso, M.G., Viehoever, P., Dekker, K.A. and
                                                          High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IndelB
                                                                                                                                                                                                        4 (bases 1 to 54)
Rosso, M.G., Li, Y., Strizhov, N. and Weisshaar, B.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 12.6; DB 9;
Pred. No. 1.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic_DNA"
/strain="Columbia 0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ecotype="Col-0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24 GTGCAAGGCTATGGGATCC 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 73.7%;
Matches 14; Conservative
```

THIS PAGE BLANK (USPTO)

us-09-699-667e-64.std.rng

```
March 15, 2005, 01:00:51; Search time 110.702 Seconds (without alignments) 1069.494 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                     8780412
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                              4390206 segs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                      - nucleic search, using sw model
                                                                                                                                                                                                                      1 ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                       IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqn2002bs:*
geneseqn2003as:*
geneseqn2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N_Geneseq_16Deco4:*
1: geneseqn1980s:*
2: geneseqn1990s:*
3: geneseqn2000s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            geneseqn2003cs:*
geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            genesegn2004as:*
genesegn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genesegn2001as:*
genesegn2001bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     geneseqn2002as:*
                                                                                                                                                                            US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                       Scoring table:
                                                                      OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database :
                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                           Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Aaz57640 Nucleotid	Aaz57636 Trans-act	Aaz57637 Trans-act	Aaz57638 Trans-act	Aan81564 Genomic s	Aan70102 Complete	Aah57497 Human liv	Aat32796 Human pro	Aat79723 Human pro	Aaz32179 Human pro	Aaf54051 Human pro	Aal56352 Human pro	Adn33950 Human cDN	Adc71539 Human NOV	Adq19501 Human sof	Aal51511 Human Nkd	Aaa16664 Human sec	Adq97146 Human can	Aah67868 C glutami	Add13201 C. glutam
SUMMARIES	ID	AAZ57640	AA257636	AA257637	AAZ57638	AAN81564	AAN70102	AAH57497	AAT32796	AAT79723	AAZ32179	AAF54051	2 AAL56352	2 ADN33950	D ADC71539	2 ADQ19501	0 AAL51511	AAA16664	2 ADQ97146	AAH67868	) ADD13201
	* Query Match Length DB	20 3	57 3	57 3	57 3	11715 1	11724 1	11724 4	11725 2	11725 2	11725 2	11725 4	13870 1	20188 1	20190 1	35005 1	1859 1	2922 3	348101 12	1380 5	1543 1
•	Query	100.0	0.06	0.06	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	85.0	85.0	85.0 1	84.0	84.0		82.0	82.0
	Score	20	18	18	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17	17	17	16.8	16.8	16.8	16.4	16.4
	Result No.	п	7	e	4	ς Ω	9	0	& U	о О	c 10	c 11	c 12	13	14	c 15	16	17	c 18	19	20

Aah68533 C glutami	Adl66390 Human Nkd	Aaf93971 Primer sp	Abd16174 Pseudomon	Abd16052 Pseudomon	Aac58107 Human PRO	Aaa37101 Human PRO	Aaf54401 Primer #8	Acd68440 Novel hum	Ach04542 Human cDN	Acd68086 Novel hum	Adc18150 Human PRO	Add70796 Human cDN	Add39873 Human cDN	Add70319 Human cDN	Add38440 Human cDN	Add39396 Human cDN	Add38919 Human cDN	Add40350 Human cDN	Ade50571 Human cDN	Ade20183 Human cDN	Ade50094 Human cDN	Ade21652 Human cDN	Adf30077 Human cDN	Adf55970 Human cDN
AAH68533	ADL66390	AAF93971	ABD16174	ABD16052	AAC58107	AAA37101	AAF54401	ACD68440	ACH04542	ACD68086	ADC18150	ADD70796	ADD39873	ADD70319	ADD38440	ADD39396	ADD38919	ADD40350	ADE50571	ADE20183	ADE50094	ADE21652	ADF30077	ADF55970
Ŋ	12	Ŋ	11	11	М	۳	4	σ	6	σ	ដ	10	유	10	2	2	2	10	ព	2	10	ដ	10	10
349980	29	770	1089	1482	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320	2320
82.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
16.4	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
21	22	23	24	25	56	27	28	59	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
υ		υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ	υ

## ALIGNMENTS

```
/*tag= a
/bound_moiety= "Bimolecular ribozyme RzB fragment"
/bound_moiety= "Bimole-stranded region with bases 37-30 of
sequence AAZ57639"
15. .20
                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                          /*tag= b
/bund molety= "Bimolecular ribozyme RzB fragment"
/bound molety= "Bimolecular ribozyme RzB fragment"
/note= "Forms double-stranded region with bases 6-1
sequence AAZ57639"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                   Nucleotide sequence of bimolecular ribozyme RzB fragment.
                                                                                                        Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; 88.
                                                                                                                                                                                                                                                                                                                                                                                                          Lafontaine D;
                                                                                                                                                               Location/Qualifiers
                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                          Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                           99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                98CA-02230203
                     AAZS7640 standard; RNA; 20
                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                    (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-096791/08.
                                                                                                                                                                Key
misc_binding
                                                                                                                                                                                                                                                                                                                                           29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                29-APR-1998;
                                                                                                                                                                                                                                                                                               W09955856-A2
                                                                                                                                                                                                                             misc_binding
                                                               05-APR-2000
                                                                                                                                                                                                                                                                                                                     04-NOV-1999.
                                                                                                                                           Synthetic.
                                           AAZS7640;
RESULT 1
            AAZ57640
```

```
stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                             AAZ57637;
                                                                                                                                                                                                                                                                                                    RESULT 3
                                                                                                                                                                                                                                                                                                                AAZ57637
à
                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                    ö
                                    This ribozyme cleaves substrate SP1.1 (see AAS57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3 -UNNXNN -5. The substrate of the enzyme has the sequence 5 - H *GNNHNN-3. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3 'to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme of the substrate sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                              sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1..6
/*tage a
/*note= "Porms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20. .25
/*tag= c
/bound moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                    Gaps
                             This is the nucleotide sequence of bimolecular ribozyme RzB fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                             Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide
                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                 Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.1; ss.
                                                                                                                                                                                             100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1.1; ive 0; Mismatches 0; Indels
                                                                                                                                                        therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                           Sequence 20 BP; 4 A; 6 C; 8 G; 0 T; 2 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lafontaine
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                        1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                    GGCGCAUGGCUAAGGGACCC 20
         Example 5; Fig 4; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98CA-02230203
                                                                                                                                                                                                                                                                                                               AAZ57636 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ъ
                                                                                                                                                                                                                    20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= (
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-096791/08.
                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
misc_binding
                                                                                                                                                                                                                                                                                                                                                        05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stem_loop
                                                                                                                                                                                                                                                                                                                                     AAZ57636;
                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                          a
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                               This is the nucleotide sequence of ribozyme deltaRzPl.1. This ribozyme cleaves substrate SPl.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzPl.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nuclectides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave irral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
"Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= b
20. .25
20. .25
/*tag= c
/bound moiety= "SP1.2 substrate bases (AAZ57634)
30. .45
/*tag= d
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzP1.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3; Length 57;
14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 90.0%; Score 18; DB Best Local Similarity 100.0%; Pred. No. 14; Matches 18; Conservative 0; Mismatches
diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                    Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40 cecaugecuaagegacec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57637 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
/note=
7...19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
```

```
This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AAZS7641). The invention. This ribozyme cleaves substrate SP1.1 (see deltaizel.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GANNIN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides by '). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           enzymes also have other therapeutīc, biotechnological and diagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                 New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match

87.0%; Score 17.4; DB 3; Length 57;
Best Local Similarity 94.7%; Pred. No. 29;
Matches 18; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seguence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human protein C; blood coagulation disorders; ss.
   Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomic sequence encoding protein C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
2131. .2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= exon VIII
10517. .12006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             label= exon III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon VII
                                                                                                                                                                                                             Example 1; Fig 2; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39 GGGCAUGCCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               '*tag= b
'label= exon II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon IV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            label= exon VI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'label= exon I
   Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
AAN81564/c
ID AAN81564 standard; DNA; 11715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3464. .3630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5093. .5117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5212. .5349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5452. .5586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .8397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
                                                             WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
05-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAN81564;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THE STATE OF THE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapeuric, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the deltaRzP1.1 sequence (AAS57636) shown in figure 1
                                                                                                                                                                     cleaves substrate SPI.2 (see ARZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzPi.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNAIN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7. .19

/*tag= b

20. .25

/*tag= c

/bound_moiety= "SP1.1 substrate bases (AAZ57641) 5-11"
                                                                                                                                               This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme

    .6
    /*tag= a
    /note= "Forms double stranded region with bases 52-57"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Trans-acting antigenomic delta ribozyme nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.0%; Score 18; DB 3; Length 57; 100.0%; Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                        Example 1; Page; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 CGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZS7638 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= 0
52..57
/*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nisc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
```

셤 8

ö

Gape

```
A lambda gt cDNA library was prepared from human liver mRNA. The library was screened with iodine-125 labelled antibody to human protein C. A cDNA which lacked the coding sequence for the pre-pro peptide and the forst 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human protein C or activated protein C - prepd. using expression vector capable of integration in mammalian host cell DNA.
                                                                                                                                                                                                                                                                                                                        note= "encodes amino acids 137 to 184"
396. .9267
                                                                                                                                                                                                                                                                                                                                                                                                                    note= "encodes amino acids 185 to 223"
386. .10514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note= "encodes amino acids 224 to 419"
1151. .11156
                                                                                                                                                                                                                              note= "encodes amino acids 92 to 136"
585. .8252
                                       note= "encodes amino acids 38 to 45"
118. .5209
                                                                                                                                  note= "encodes amino acids 46 to 91" 348. ,5449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Davie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Foster DC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page 33; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0515. .11104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .11385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86EP-00304970.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85US-00749600.
85US-00766109.
                                                                                                                                                                                                                                                                                 3253. .8395
                                                                                           210. 5347
                                                                                                                                                                                                                                                                                                                                                                              268. .9385
                                                                                                                                                                                       450. .5584
                                                                                                                                                                                                                                                                                                              number= 6
                                                                                                                                                                                                                                                                                                                                                                                                       number= 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                            number= 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   number= 8
                                                                                                                       number= 4
                                                                                                                                                                           number= 4
                                                                                                                                                                                                                   number= 5
                                                                                                                                                                                                                                                                     number= 5
                                                                                                                                                                                                                                                                                                                                                                 number= 6
                          number= 3
                                                                                number= 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murray MJ, Berkner KL,
                                                                                                                                                                                                                                                                                                                                                                                            *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UNIW ) UNIV WASHINGTON
                                                                                                                                                              *tag=
                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *tag=
11173
                                                                    *tag=
                                                                                                                                                                                                                                                          *tag=
                                                                                                                                                                                                                                                                                                                                                     *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
11380.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
11399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1987-081505/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; AAP70855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-JUN-1985;
15-AUG-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JUN-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP215548-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                   intron
                                                      intron
                                                                                                                                                  intron
                                                                                                                                                                                                                                            intron
                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                   exon
                                                                                              exon
  exon
                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
 ö
                                                                                                                                                                                                                                          Protein C DNA coding sequence and expression vector for prodn. - used for treating blood coagulation disorders.
                                                                                                                                                                                                                                                                                                       In the construction of the full length protein C gene this sequence the introns removed then is joined to a cDNA clone. The desired genomic:cDNA is then generated by looping out of unwanted sequences using oligonuclectide-directed deletion mutagenesis. The protein produced upon transformation of mammalian host cells, contg. the recombinant DNA, has substantially the same biological activity as natural protein C and is hence useful in the treatment of blood coagulation disorders. See also AAN81563. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human Protein C; anti-coagulant; thrombosis; serine protease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11715 BP; 2443 A; 3292 C; 3375 G; 2605 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 87.0%; Score 17.4; DB 1; Length 11715; Best Local Similarity 89.5%; Pred. No. 56; Matches 17; Conservative 1; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= c
/number= 2
/note= "encodes amino acids -19 to +37"
5631. 5592
/*tag= d
/number= 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'number= 1
'note= "encodes amino acids -42 to -20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complete genomic sequence of human Protein C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                          Berkner KL;
                                                                                                                                                                                                                                                                               Disclosure; Page ?; 35pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAN70102 standard; DNA; 11724 BP
/*tag= h
/label= exon IX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACC 19
                                                                                          87EP-00309528
                                                                                                                     86US-00924462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .3463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2464. .3630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'number= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag= b
                                                                                                                                               (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                          Foster DC, Murray MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2201.
                                                                                                                                                                                                    WPI; 1988-121259/18.
                                                                                                                                                                                                                 P-PSDB; AAP81205.
                                                                                           28-OCT-1987;
                                                                                                                      29-OCT-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
10-MAY-1991
                                                                 04-MAY-1988
                                       EP266190-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAN70102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAN70102/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
```

ઠ 원 89.58;

```
Best Local Similarity
Matches 17; Conserv
                                                                                                                                                                                                                    AAT32796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    intron
                                                                                                                                               RESULT 8
AAT32796/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ntron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ntron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                         ð
                                                                                         셤
                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH57161 to AAH57576 represent cell and tissue specific polynucleotide sequences (I). (I) can have cytostatic, immunomodulatory and neuroprotective activities, and can be used in gene therapy. (I) and protective activities, and can be used in gene therapy. (I) and protectins (II) encoded by then are used in high throughput screening assays to select DNA molecules, RNA molecules, peptide nucleic acids, mimetries, peptides, proteins, agonists, antagonists, antibodies or their fragments, immunoglobulins, inhibitors, drug compounds and pharmaceutical embryonic stem cells into a tissue selected from brain, heart, kidney, liver, lung, skeletal muscle or pancreatic tissues. (I) and (II) are used to produce an expression profile that defines a metabolic or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            developmental process, treatment, condition, disease or disorder. The gene profile can be used for disgnosis, prognosis or monitoring of treatments and for investigating a predisposition to a disorder where the gene is associated with a cancer, immunopathology or neuropathology
amino acids of protein C was isolated and used as a hybridisation probe. The remainder of the coding sequence was obtained from a human genomic DNA library in lambda Charon 4A. Recombinantly produced protein C can be used to treat thrombotic disorders such as venous thrombosis. (Updated or 25-WAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; tissue specific; diagnosis; brain; heart; skeletal muscle; lung; liveris; vorry; stomach; intestine; kidney; pancaeas; ss; metabolic disease; developmental disease; cytostatic; immunomodulatory; neuroprotective; gene therapy; cancer; immunopathology; neuropathology.
                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New cell and tissue specific polynucleotides useful for diagnosis, prognosis or monitoring of treatments for disorders where the gene associated with a cancer, immunopathology or neuropathology.
                                                                                                             Sequence 11724 BP; 2445 A; 3302 C; 3370 G; 2607 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 11724 BP; 2443 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                  ö
                                                                                                                                               DB 1; Length 11724;
                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human liver cell specific cDNA sequence SEQ ID NO:337.
                                                                                                                                             Score 17.4; 1
Pred. No. 56;
                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watson GA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 254-257; 327pp; English.
                                                                                                                                                                                                                                                                                                    877 GCCCATGCCAAAGGGACC 859
                                                                                                                                                                                1,
                                                                                                                                                                                                                    1 GCCGCAUGGCUAAGGGACC 19
                                                                                                                                               87.0%;
89.5%;
                                                                                                                                                                                  17; Conservative
                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                 셤
   8888888
                                                                                                                                                                                                                    ઠ
```

87.0%; Score 17.4; DB 4; Length 11724;

Query Match

```
ö
                                                                                                                                                                                                                                                                                                                                      ^{\mbox{\scriptsize m}} "base 9268 is given as 'y' in the specification"
        Gaps
                                                                                                                         Activated protein C; serine protease; thrombosis; thrombolytic; fibrinolytic; antithrombotic; blood clotting; therapy; ss.
       ö
       Indela
        ..
Pred. No. 56;
1; Mismatches
                                                                                                                                                                             2131. .2133
                                                                                                                                                          Location/Qualifiers
                                                                AAT32796 standard; DNA; 11725 BP.
                    1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                           /codon_start= ;
2251. 3463
/*tag= b
                                                                                                                                                                                                                                                                                     /*tag= j
8253. pi
8253. pi
/**
                                                                                                                                                                                                                                                                                                  /*tag= k
8395. o^
                                                                                                                                                                                                                                                                                                                                                                                                                                                               85US-00749600.
86US-00924462.
87US-00130370.
                                                                                                                                                                                                                                                                                                                                                              .10515
                                                                                                                                                                                                                                                                                                                                                                                         .11157
                                                                                                                                                                                        b
.4. .3630
/*tag= c
.31.
                                                                                                                                                                                                                                                                                                                                                                            .11725
                                                                                                                                                                                                                                                                                                                                                                                                      .11386
                                                                                                                                                                                                                                                                                                                                                                                                                                                   94US-00225253
                                                                                                                                                                                                                                                                                                                                                  9269. .9386
/*tag= n
9387. .10515
                                                                                                 (first entry)
                                                                                                                                                                       tag= a
       17; Conservative
                                                                                                                                                                                                                   /*tag=
5093. .!
                                                                                                                                                                                                                                             /*tag=
5210. .
                                                                                                                                                                                                                                                                                   /*tag=
5583. .
                                                                                                                                                                                                                                                                                                                                      /*tag=
/note=
                                                                                                                                                                                                                                                                                                                                                                      /*tag=
10516.
                                                                                                                                                                                                                                                                       /*tag=
5450. .
                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
11152.
                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                          *tag=
                                                                                                                                                                                                                                                                                                                          *tag=
                                                                                           (revised)
                                                                                                            Human protein C gene.
                                                                                                                                                                                                                                                                                                                                misc difference
                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-JUN-1985;
29-OCT-1986;
08-DEC-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  38-APR-1994;
                                                                                         25-MAR-2003
05-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                         polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                      polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                          US5516650-A
                                                                                                                                                                                                                                                                                                                                                                                                                                      14-MAY-1996
```

```
30-NOV-1995;
13-JUN-1996;
                                                                 WO9720043-A1
                                                                                                26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                 05-JUN-1997.
                                                                                                                                                                 Garner I, (
Prunkard DE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ32179;
                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
AAZ32179/c
         exon
                                          exon
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8XXXXXXXXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                         ö
                                                                                                                                       A genomic DNA fragment (AAT12796) codes for human full-length protein C (AAW02600), a zymogen of a serine protease that plays an important role in blood clotting and in the generation of fibrinolytic activity in vivo. It was obtd. from a human genomic library in phage Charon 4A using a partial cDNA clone as probe. A complete cDNA clone (AAT12795) was also produced. Protein C-encoding nucleic acids can be used for large-scale prodn. of protein C, or variants modified to improve cleavage between the heavy and light chains of the circulating intermediate. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                         New DNA encoding modified forms of opt. activated protein C - and related transformed cells for prodn. of recombinant protein C for use e.g. as an
                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                         Sequence 11725 BP; 2444 A; 3295 C; 3372 G; 2613 T; 0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                  Protein C; transgenic animal; sheep; rabbit; cattle; goat; milk;
blood clotting; anticoagulant; human; ds.
                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                         DB 2; Length 11725;
                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                         1; Mismatches
                                                                                                                                                                                                                                         87.0%; Score 17.4; 1
89.5%; Pred. No. 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
3520. .3630
                                                Foster DC;
                                                                                                                         Example 1; Fig 4A-D; 34pp; English
                                                                                                                                                                                                                                                                                  877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                  AAT79723 standard; DNA; 11725 BP
                                                                                                                                                                                                                                                                          1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,31. .5092
/*tag= b
5093. .5117
/*tag= c
5118
89US-00317205.
90US-00582131.
92US-00987532.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= f
5450. - 5449
/*tag= f
5450. - 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= d
5210.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= e
5348.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= g
5585. p?
/*t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45. .8252
/*tag= h
8253.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8253. .8395
/*tag= i
8396. .9268
                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                Local Similarity 89.5
es 17; Conservative
                                (ZYMO ) ZYMOGENETICS INC
                                                Murray MJ, Berkner KL,
                                                                                                         anti-thrombotic agent
                                                                                                                                                                                                                                                                                                                                                                                  Human protein C gene
                                                                 WPI; 1996-251006/25.
                                                                        P-PSDB; AAW02600
28-FEB-1989;
                                                                                                                                                                                                                                                                                                                                                                 11-DEC-1997
                04-DEC-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                 AAT79723;
                                                                                                                                                                                                                                                                                                               ntron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ntron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                         Matches
셤
                                                                                                                                                                                                                                                                          ઠે
```

```
This DNA sequence comprises human genomic DNA encoding protein C (AAW25086). A claimed method for producing human protein C in the milk of a transgenic animal involves: (a) providing a DNA construct comprising DNA encoding a secretion signal and a protein C propeptide, operably linked to DNA encoding two chain cleavage site-modified protein C, the 2 DNA sequences being linked to elements required for protein C expression in a mammary gland of a host female animal, esp. the beta-lactoglobulin gene promoter (see AAT79725); and (b) using the DNA construct to breed a transgenic animal (esp. abeby, rabbit, cattle, goat) that produces protein C in its milk, at least 90% of the protein C being in the two-chain form. Modification of the protein C two-chain cleavage site (see AAW25085) improves the maturation of recombinant protein C from aingle chain to two-chain form. Also claimed is a non-human mammalian embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Production of protein C in transgenic animal - useful for high quantity protein C production with therapeutic value.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human, coding sequence polymorphism, vascular pathology gene; polymorphic site; phenotype correlation; forensic; paternity testing; medicine; genetic analysis; vascular disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sprecher CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11725 BP; 2444 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87.0%; Score 17.4; DB 2; Length 11725; 89.5%; Pred. No. 56; 1; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Foster DC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Temperley SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human protein C nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 6; Page 49-58; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAZ32179 standard; cDNA; 11725 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                /*tag= 1
10516. .11102
/*tag= j
9269. .9386
/*tag= k
9387. .10515
                                                                                                                                                                                                                                                                                                                                                                                              96WO-US018866
                                                                                                                                                                                                                                                                                                                                                                                                                                                           95US-00565074.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 87.0%;
Best Local Similarity 89.5%;
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-JAN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ZYMO ) ZYMOGENETICS INC. (PPLT-) PPL THERAPEUTICS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cottingham I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                site-modified protein C
                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1997-310599/28.
P-PSDB; AAW25086.
```

New regulatory elements that control age-related gene expression, useful in gene therapy and for reducing Factor IX expression.

Kurachi S;

Kurachi K,

WPI; 2001-061708/07.

Disclosure, Fig 12; 225pp; English.

```
AAZ32159 to AAZ32194 represent reference alleles for specifically claimed nucleic acid sequences from the present invention which comprise polymorphic sites as given in a table in the specification, selected from 92 single nucleotide polymorphisms in which the nucleotide at the polymorphic site is different from a nucleotide at the same site in a reference allele. The nucleic acids, and primers and probes, are used to identify polymorphisms, which may predispose an individual to disease, especially a vascular disease. They can also be used in phenotype correlations, forensics, paternity testing, medicine or genetic analysis.

AAY49550 to AAY49573 represent the proteins which correspond to some of
                                                                                                                                                                                                                                                              Determination of polymorphisms in genes, especially those identifying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Age-related gene regulation, gene expression, human protein C; hPC; 5' UTR; 5' untranslated region; age-regulatable expression construct; PEA-3 element, polyoma virus activator 3; antisense therapy; gene therapy; thrombosis; cardiovascular disease; diabetes; Alzheimer's disease; Parkinson's disease; cancer; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11725 BP; 2444 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Length 11725;
                                                                                                                                                                              Cargill M, Ireland JS, Rozen SG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
87.0%; Score 17.4; E
Best Local Similarity 89.5%; Pred. No. 56;
Matches 17; Conservative 1; Mismatches
                                                                                                                                             (WHED ) WHITEHEAD INST BIOMEDICAL RES.
                                                                                                                                                                                                                                                                               predisposition to vascular disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human protein C cDNA, SEQ ID NO:50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF54051 standard; cDNA; 11725 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             877 GGCGCATGCCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                              Claim 1; Fig 23; 134pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACC 19
                                                                              99WO-US006473
                                                                                                               98US-00054272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUN-2000; 2000WO-US015728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00328925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               osteoarthritis; dementia; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                            Lander ES, Daley GQ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the reference alleles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UNMI ) UNIV MICHIGAN
                                                                                                                                                                                                              WPI; 1999-620066/53.
                                                                                                                                                                                                                               P-PSDB; AAY49560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200075279-A2
                                                                              26-MAR-1999;
                                                                                                               01-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-JUN-1999;
               WO9950454-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001
                                              07-0CT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF54051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

Gaps

ö

Indels

```
The invention relates to muclate acts sequences which regulate gene carperesion in an age-related manner and/or in a liver-specific manner. The invention identifies regions of the human factor IX (hFIX) gene, and a region of the human protein (hFO) gene, which are age-related regulatory sequences are fegulatory sequences. The hFIX age-related regulatory sequences are fegulatory sequences. The hFIX age-related regulatory sequences are fesignated AES: (AAF54016) and AE3: (AAF54018) and 3 UTR (at position 13483-60 AAF54018) and 3 UTR (at position 13483-60 AAF54018) respectively. These elements act sprengistically to increase hFIX levels over the lifespan of an individual; however, they can independently exert effects on hFIX mRNA, and AE3' acting to stabilise hFIX mRNA, and AE3' acting to increase hFIX mRNA levels, over time. AE5' also directs liver-specific expression. The hFI APE5' acting to stabilise hFIX mRNA, and AE3' acting to increase hFIX mRNA levels, over time. AE5' also directs liver-specific expression. The hIV of gene age-related regulatory sequence is found in the 5' UTR (AAF54081), and contains two PEA-3 (PO)Voma virus activator 3) elements of 'GAGGAAA-3' and 5'-GAGGAAG-3' The age-related regulatory sequences of the invention, along with their homologues, variants and fragments, may be used in the construction of recombinant expression vectors for the pro-coagulants factor IX promoter include those encoding proteins such as luciferase. CC and the SEA protein and reporter proteins such as luciferase. CC and the SEA protein and reporter proteins such as luciferase. The expression vectors of the invention may be used in dene therapy to provide age-related and/or liver-specific expression of target genes. Age-regulatable constructs may be used in the treatment of such age-related conditions such as thrombosis, cardiovascular conditions as seociated with the natural age-related and/or liver-repease conditions as especiated with the natural age-related by the propers of the propers of the properses factor 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     regulatory sequences, are useful as probes to detect, isolate or identify other such sequences in samples. The present sequence represents CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; protein C; single nucleotide polymorphism; SNP; inflammation; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expression. Transgenic cells or animals that contain vectors of the invention are useful as models of these diseases, in screening for potential therapeutic agents and for studying normal processes such ageing and gene expression. Fragments and homologues of age-related
                                                                                                                                                                                                    The invention relates to nucleic acid sequences which regulate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 11725 BP; 2444 A; 3298 C; 3375 G; 2608 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 17.4; DB 4; Length 11725; Pred. No. 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            352/c .
AAL56352 standard; DNA; 13870 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human protein C gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAL56352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

2805 GCCCCATGCCAAAGGGACC 2787

В

```
The present invention relates to a method of obtaining a prognosis for a patient having or at risk of developing an inflammatory condition, which comprises determining a genotype including one or more polymorphism sites in the protein C gene for the patient, where the genotype is indicative of an ability of the patient to recover from an inflammatory condition. The method is useful in obtaining a prognosis for a patient having or at risk of developing an inflammatory condition. Inflammatory condition is selected from sepsis, septicemia, pneumonia, septic shock, Acute Respiratory Distress Syndrome (ARDS), acute lung injury, infection, pancreatitis, bactersemia, peritonitis, abdominal, abscess, inflammation due to trauma or surgery, chronic inflammatory disease, ischaemia, inschaemia, peritonitis and reactions to ingested, inflammation chemotherapy or radiotherapy and reactions to ingested, inhaled, infused, injected or delivered substances, preferably systemic inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Obtaining a prognosis for a patient having or at risk of developing an inflammatory condition, e.g. systemic inflammatory response syndrome by determining protein C polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             response syndrome (SIRS). The present sequence is the human protein C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 13870 BP; 2883 A; 3910 C; 4002 G; 3075 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 17.4; DB 12; Length 13870;
Pred. No. 57;
1; Mismatches 1; Indels 0;
                                         Location/Qualifiers
replace(1386,C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page 15-20; Opp; English.
                                                                                                                                                                                                                                                                                                                                                                           /*tag= k
replace(12109,C)
                                                                                      replace (2405, C)
                                                                                                                                               replace (2583,T)
                                                                                                                                                                             replace (3920, C)
                                                                                                                                                                                                          replace (4800, C)
                                                                                                                                                                                                                                      replace (4919,G)
                                                                                                                                                                                                                                                                   replace (4956,C)
                                                                                                                                                                                                                                                                                                 replace (5867,G)
                                                                                                                                                                                                                                                                                                                              replace (6187, T)
                                                                                                                                                                                                                                                                                                                                                          replace (9534,C)
                                                                                                                    replace (2418,G)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYBR-) UNIV BRITISH COLUMBIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-MAY-2003; 2003WO-CA000751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-MAY-2002; 2002US-0383128P
                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Russell JA, Walley KR;
                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-035164/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2003100090-A2
               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-DEC-2003
                                                       aliele
                                                                                      allele
                                                                                                                    allele
                                                                                                                                               allele
                                                                                                                                                                             allele
                                                                                                                                                                                                         allele
                                                                                                                                                                                                                                    allele
                                                                                                                                                                                                                                                                   allele
                                                                                                                                                                                                                                                                                                 allele
                                                                                                                                                                                                                                                                                                                              allele
                                                                                                                                                                                                                                                                                                                                                          allele
                                                                                                                                                                                                                                                                                                                                                                                       allele
```

```
Human, 88; NOVX, pancreatic polypeptide; angiopoietin; interleukin-1; endothelin-2; endozepine; amphiregulin; metallocarboxypeptidase; metabolic disorder; diabetes; obesity; infectious disease; anorexia; cancer; cancer-associated cachexia; neurodegenerative disorder; Alzheimer's disease; Parkinson's disease; immune disorder;
                                                                                                                                                                                                                                                                                                                    haematopoietic disorder; dyslipidaemia; metabolic disturbance; metabolic syndrome X; wasting disorder; antibacterial agent.
                                       BP
                                       ADN33950 standard; cDNA; 20188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-NOV-2001; 2001US-0334300P-
03-DEC-2001; 2001US-0338196P-
19-APR-2002; 2002US-037806P-
16-MAY-2002; 2002US-03810439P-
07-AUG-2002; 2002US-0401593P-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001US-0338626P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-00996015.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-NOV-2002; 2002US-00287190
                                                                                                                                                                      Human cDNA encoding NOV7a.
                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANDERSON D W.
BOLDOG F L.
BURGESS C E.
CHANT J S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PENA C E A.
RASTELLI L.
RIEGER D K.
SENGER K E Q.
SMITHSON G.
SPATEK K A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STONE D J.
TWOMLOW N.
VERNET C A M.
VOSS E Z.
ZERHUSEN B D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALSOBROOK J P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KHRAMTSOV N V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PADIGARU M.
PATTURAJAN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAPOVAL A.
CHAUDHURI A.
EDINGER S R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GANGOLLI E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GERLACH V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LEITE M W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEZES P S.
MILLET I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OOI C E.
ORT T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GUO X S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EISEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                              US2004038230-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-NOV-2001;
28-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-NOV-2001;
                                                                                                                            17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-FEB-2004.
                                                                                  ADN33950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (VOSS/)
(ZERH/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALSO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EISE/)
(GANG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (KHRA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BOLD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAP/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GUOX/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEZE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MILL/)
(OOIC/)
(ORTT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PADI/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PENA/)
(RAST/)
(RIEG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPAD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STON/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAN/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BURG/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDIN/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GERL/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SENG/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPYT/
RESULT 13
                      ADN33950
                                            TO THE SET OF THE SET
```

87.0%;

ö

Gaps

Best Local Similarity 89.5 Matches 17; Conservative

Query Match

Homo sapiens.

```
The invention relates to 87 isolated NOVX polypeptides (NOV1-NOV5), their mature forms and their encoding polynucleotides having sequence candinatity to pancreatic polypeptide (NOV2), endozepine (NOV2), interleukin-1 (NOV3), endothelin-2 (NOV4), endozepine (NOV5), and the mannifacture of a medicament for treating a human disease associated with NOVX, detecting NOVX in a sample via an immunoassay, identifying an agent that binds to the NOVX polypeptide, a cell comprising the activity of NOVX, a vector comprising NOVX polypeptide, a cell comprising the polymucleotide in a sample using a hybridisation a cell comprising the polymucleotide in a sample using hybridisation a cell comprising the polymucleotide in a sample using hybridisation conditions that lead to expression of the polypeptide. NOVX and its polymucleotide are used to prevent, diagnose or treat a medical condition to prevent, diagnose or treat a medical condition in human related to the aberrant expression and activity of NOVX conditions that lead to sexpression of the polypeptides. Altheimer's disease, anorexia, cancer, cancer, diabetes, obesity, infectious disease, anorexia, cancer, cancer associated cachexia, neurodegenerative diseases, anorexia, cancer, cancer associated cachexia, neurodegenerative construction diseases, mand disease, mand disease, mand disease, anorexia, cancer associated with obesity, the metabolic syndrome X and disease, mating diseases associated with obesity, the metabolic syndrome X and metabolic diseases associated with obesity, the metabolic syndrome X and metabolic and provention of the polypeptides cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               They may also be used as antibacterial agents. NOVX may also be used as an antigen in the production of antibodies and in assays to identify modulators (agonists and antagonists) of the expression and activity of NOVX. The present sequence encodes a NOVX protein.
                                              Alsobrook JP, Anderson DW, Boldog FL, Burgess CE, Chant JS; Chapoval A, Chaudhuri A, Edinger SR, Eisen A, Gangolli EA; Gerlach V, Guo XS, Ji W, Khramtsov NV, Leite MW, Li L, Mezes PS; Miller I, Ool CE, Ort T, Padigaru M, Patturajan M, Pena CEA; Rastelli L, Rieger DK, Senger KEQ, Smithson G, Spaderna SK; Spytek KA, Stone DJ, Twomlow N, Vernet CAM, Voss EZ, Zerhusen BD; Zhong M;
                                                                                                                                                                                                                                                                                                                                                                                         Isolated NOVX polypeptides and nucleic acids, useful for preventing, diagnosing and treating e.g. cancer, diabetes and Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 20; SEQ ID NO 167; 129pp; English.
                                                                                                                                                                                                                                                                                                     WPI; 2004-213932/20
                                                                                                                                                                                                                                                                                                                                 P-PSDB; ADN33951.
(ZHON/) ZHONG M.
```

Sequence 20188 BP; 4653 A; 5404 C; 5682 G; 4428 T; 0 U; 21 Other;

Gaps ö 85.0%; Score 17; DB 12; Length 20188; 88.2%; Pred, No. 96; 0; Indels Pred. No. 96; 2; Mismatches Best Local Similarity 88.2 Matches 15; Conservative Query Match

ö

ò 셤 RESULT 14

ADC71539;

ADC71539 standard; cDNA; 20190 BP

18-DEC-2003 (first entry)

Human NOV7a encoding cDNA SEQ ID NO:167.

human; NOVX; cytostatic; anorectic; antidiabetic; antiparkinsonian; neuroprotective; nootropic; immunomodulator; antiarteriosclerotic; nephrotropic; osteopathic; vaccine; gene therapy; cancer; obesity; diabetes; metabolic disorder; anorexia; neurodegenerative disease; Parkinson's disease; Alzheimer's disease; immune disorder; haematopoietic disorder; aherosclerosis; renal failure; hyperkalaemia; hypoglycaemia; bone disorder; wasting disorder; gene; ss. ADC71539
IID ADC7
XX AC ADC7
XX XX IB-D
XX XX IB-D
XX XX Huma

```
Location/Qualifiers
1. .2205
                    /product= "NOV7a"
                                                                     03-DEC-2001, 2001US-0338196P.
19-APR-2002, 2002US-0373806P.
16-MAY-2002, 2002US-0381043P.
07-AUG-2002, 2002US-0401593P.
04-NOV-2002, 2002US-0401599P.
                                                         2001US-00333912P.
2001US-0334300P.
                                             05-NOV-2002; 2002WO-US035535
                /*tag= a
                             WO2003040329-A2
                                                     05-NOV-2001;
                                                                  29-NOV-2001;
                                                         28-NOV-2001;
                                                             28-NOV-2001;
                                     15-MAY-2003
        Key
```

Alsobrook JP, Anderson DW, Boldog FL, Burgess CE, Chant JS; Chapoval A, Chaudhuri A, Edinger SR, Eisen A, Gangolli EA; Gerlach VL, Guo X, Ji W, Khramtsov NV, Leite MW, Li L, Mezes PS; Millet I, Ooi CE, Ort T, Paddsau M, Patturajan M, Pena CEA; Rastelli L, Rieger DK, Quinn Senger KE, Smithson G, Spaderna SK; Spytek KA, Stone DJ, Twomlow N, Vernet CAM, Voss Ez, Zerhusen BD; WPI; 2003-441554/41. P-PSDB; ADC71540. Zhong M;

(CURA-) CURAGEN CORP.

New NOVX polypeptides and nucleic acids for diagnosing, preventing or treating NOVX-associated disorders, e.g. cancer, obesity, diabetes or atherosclerosis, and for chromosome mapping, tissue typing or pharmacogenomics.

Claim 20; SEQ ID NO 167; 112pp; English.

The present invention describes novel human proteins designated NOVX, where X can be an integer of 1 to 7. The NOVX protein and nucleotide where X can be an integer of 1 to 7. The NOVX protein and nucleotide sequences have cytosfatic, anorectic, antidabetic, antiparkinsonian, neuroprotective, nootropic, immunoadulator, antiarteriosolerotic.

C nephrotropic and osteopathic activities, and can be used in wandfacturing a medicament for treating a syndrome associated with a human disease, the disease selected from a pathology associated with the protein. The disease selected from a pathology associated with the protein. The c disease can be used for diagnosing, treating or preventing other antibodies may also be used for diagnosing, treating or preventing other pathologies associated with abernant NOVX expression or activity, such as obssity, diabetes, metabolic disorders, anorexia, neurodegenerative c diseases (e.g. Parkinson's disease, anorexia, neurodegenerative c disorders, haematopoietic disorders, atherosclerosis, renal failure, NoVX nucleic acids and proteins may also be used in chromosome mapping, tissue typing, predictive medicine and pharmacogenomics. The present

Sequence 20190 BP; 4650 A; 5340 C; 5756 G; 4429 T; 0 U; 15 Other; / Match 85.0%; Score 17; DB 10; Length 20190; Local Similarity 88.2%; Pred. No. 96; Conservative 2; Mismatches 0; Indels 0 Query Match Best Loca Matches

ö

Gaps

ö

ò

```
soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel method for detecting soft tissue sarcoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        which comparises obtaining a first soft tissue sample from a individual determining the expression of a gene in both sample from a individual determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples, where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has sylvastic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 135005 BP; 32951 A; 33605 C; 32661 G; 35788 T; 0 U; 0 Other;
                                                                                                                                   Human soft tissue sarcoma-upregulated DNA - SEQ ID 2320.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; SEQ ID NO 2320; 210pp; English.
                 ADQ19501 standard; DNA; 135005 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zlotnik A;
                                                                                                                                                                                                                                                                                                                                                                                                                         (PROT-) PROTEIN DESIGN LABS INC.
                                                                                                                                                                                                                                                                                                                                                                                   26-NOV-2002; 2002US-0429739P.
                                                                                                                                                                                                                                                                                                                                                26-NOV-2003; 2003WO-US038193
                                                                                             26-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ginsburg WM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-441208/41.
                                                                                                                                                                                                                                                                  WO2004048938-A2
                                                                                                                                                                                                                                Нощо варіепв.
                                                                                                                                                                                                                                                                                                          10-JUN-2004.
                                                       ADQ19501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aziz N,
```

Query Match 85.0%; Score 17; DB 12; Length 135005; Best Local Similarity 88.2%; Pred. No. 1.2e+02; Matches 15; Conservative 2; Mismatches 0; Indels 0; Gaps

ö

1 GGCGCAUGGCUAAGGGA 17

108776 GGCGCATGGCTAAGGGA 108760

දි දි

Search completed: March 15, 2005, 11:20:20 Job time : 117.702 secs

Н

```
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 18503, A Sequence 176107, Sequence 1, Appli Sequence 31, Appli Sequence 16753, A Sequence 14756, A Sequence 14556, A Sequence 4833, Ap Sequence 16575, A Sequence 16575, A Sequence 16575, A Sequence 16575, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1, Appli
1, Appli
7911, Ap
2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                                        March 15, 2005, 10:18:52 ; Search time 33.1579 Seconds
(without alignments)
986.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence Sequence (Sequence (Sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2405568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*
(cgn2_6/ptodata/1/ina/5B_COMB.seq:*
(cgn2_6/ptodata/1/ina/6A_COMB.seq:*
(cgn2_6/ptodata/1/ina/6B_COMB.seq:*
(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-949-016-18503

US-08-949-016-176107

US-08-756-506-1

US-09-054-212-31

US-09-054-212-31

US-09-949-016-16753

US-09-949-016-16575

US-09-949-016-16575

US-09-949-016-16575

US-09-949-016-16575

US-09-949-016-16575

US-09-949-016-16575

US-09-949-016-16814

US-09-949-016-16817

US-09-902-540-7911

US-09-902-540-7911

US-09-100-264-2

US-08-622-046B-13

US-08-08-08-100-264-2

US-08-08-100-264-2

US-08-08-100-264-2

US-08-08-100-264-2

US-08-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-100-264-2

US-08-622-046B-6

US-08-622-046B-6

US-08-622-046B-6

US-08-100-264-6

US-08-100-264-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                          nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                  i 1 ggcgcauggcuaagggaccc 20
                                                                                                                                                                                                                                                                                                                                                                                                                Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     111725
111725
111725
14802
1089
1482
3595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ........
                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB
Maximum DB
                                                                                                          OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database:
                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
```

00000000

Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli		тнекеог	; 0		THEREOF
9, Appli 8, Appli 20, Appli 20, Appli 20, Appli 15, Appli 4, Appli 6, Appli 8, Appli 8, Appli 8, Appli 8, Appli 8, Appli 8, Appli 8, Appli 382, Appli 382, Appli 382, Appli 382, Appli 382, Appli 382, Appli 382, Appli			Gaps		USES
		AND (	,,		AND U
Sequence Seq		ASSOCIATED OF DETECTION AND USES	Length 601; ; Indels		ASSOCIATED OF DETECTION A
-06157-9 8-859A-5 8-859A-5 8-859A-20 7-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77-820A-20 77	ENTS	WN GENES METHODS 6	.4; DB 4; .21; tches 1		N GENES METHODS
PCT-US95-06157-9 US-09-100-264-8 US-08-768-859A-5 US-08-768-859A-20 US-08-767-820A-5 US-08-767-820A-5 US-08-767-820A-10 US-08-843-076D-4 PCT-US95-06157-5 US-08-943-075D-6 US-08-943-075D-6 US-08-943-075D-6 US-08-943-075D-6 US-09-949-016-1840 US-09-949-016-1840 US-09-949-016-1840 US-09-636-215-382 US-09-636-215-382 US-09-636-215-382 US-09-636-215-382	ALIGNMENTS	949016 1. S IN KN DISEASE 9/949,0 ,755 ,768 ,498 reion 4	Score 17.4; Pred. No. 21 1; Mismatche	C 19   C 505	ULT 2 09-949-016-176107/c equence 176107, Application US/09949016 equence 176107, Application US/09949016 ENERAL INFORMATION: APPLICANT: VENTER, J. Craig et al. APPLICANT: VENTER, J. Craig et al. TITLE OF INVENTION: POLYMORPHISMS IN KNOWN TITLE OF INVENTION: WITH HUMAN DISEASE, MI FILE REPERENCE: CLO01307 CURRENT FILING DATE: 2000-04-14 PRIOR APPLICATION NUMBER: 60/241,755 PRIOR FILING DATE: 2000-10-20 PRIOR FILING DATE: 2000-10-03
<b>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</b>		n US 19 e o DARPH HUM 0-04 60/ 60/ 60/ 60/ 60/ 60/ 60/ 60/ 60/ 60/	87.0%; 89.5%; ive	GGAÇ HEÇ	ation US/ Craig et LLYMORPHIS 107TH HUMAN 107 MBER: US/ 2000-04-1 ER: 60/24 10-20 10-10-03
766 832 832 832 832 832 832 832 832 832 832		C. W.	vat	GCUAAGG        GCAAAGG	licatid J. Crai POLYM WITH NUMBER: 2000-100-11
76600000000000000000000000000000000000		9-016-18503/C ce 18503, Application US/09 No. 6812339 LINFORMATION: CANT. VENTER. GAT. VENTER. OF INVENTION: OF INVENTION: NAT PLICATION NUMBER: OF 100-101307 NT APPLICATION NUMBER: OF 100-10-20 APPLICATION NUMBER: FILING DATE: 2000-10-20 APPLICATION NUMBER: 60/237 FILING DATE: 2000-10-30 APPLICATION NUMBER: 60/237 FILING DATE: 2000-10-03 APPLICATION NUMBER: 60/237 FILING DATE: 2000-10-03 APPLICATION NUMBER: 60/237 FILING DATE: 2000-10-08 NO 18503 HH: 601 HH: 601 NUMBER: FastSEQ FOR WINDOWS VEND 18503 HH: 601 NUMBER: FastSEQ FOR WINDOWS VEND 18503 HIS 601 NUMBER: FastSEQ FOR WINDOWS VEND 18503 HIS 601	milarit Conse	ggcgcauggcuaagggacc 	9-016-176107/c ce 176107, Application US/09- No. 6812339 No. 681239 No. 681239 No. 681239 No. FORWATION: CANT: VENYER, J. Craig et al OF INVENTION: POLYMORPHISMS OF INVENTION: WITH HUMAN D REFERENCE: CLOO1307 NT APPLICATION NUMBER: 05/09 NT FILING DATE: 2000-10-20 APPLICATION NUMBER: 60/241, FILING DATE: 2000-10-20 APPLICATION NUMBER: 60/241,
25.25.25.25.25.25.25.25.25.25.25.25.25.2		SSULT 1 5-09-016-18503/c 5-09-016-18503/c 5-09-016-18503, Application Patent No. 6812339 GENERAL INVENMATION: TITLE OF INVENTION: TITLE OF INVENTION: FILE REFERENCE: CLOO1307 CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2000-19-100 FRIOR PILING DATE: 2000-10-100 FRIOR FILING DATE: 2000-10-100 FRIOR FRIO	Query Match Best Local Similarity Matches 17; Conser	1 G 523 G	RESULT 2 US-09-949-016-176107/c i Sequence 176107, Application i Patent No. 6812339 i GENERAL INFORMATION: TITLE OF INVERTION:
22266666666666444444 800126459766666666666666666666666666666666666		SULT 1 SULT 1 Sequence	Query Ma Best Loc Matches		ULT 2 09-94, 09-94, equend atent ENERA TITLE FILE I CURREI CURREI PRIOR PRIOR
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RESULT Sequence of	8 8 E	දි දි	30

```
877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 89.5
nes 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
CORGANISM: Homo sapiens
US-09-328-925-50
                                                                                                              US-09-328-925-50/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Length 11725;
                                                                                                                                                                                               Query Match
87.0%; Score 17.4; DB 4; Length 601;
Best Local Similarity 89.5%; Pred. No. 21;
Matches 17; Conservative 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
US-08-756-506-1/c
; Sequence 1, Application US/08756506
; Patent No. 5905185
; GENERAL INFORMATION:
; APPLICANT: Garner, Ian
; APPLICANT: Temperley, Simon M.
APPLICANT: Foster, Donald C.
; APPLICANT: Sprecher, Cindy A.
; APPLICANT: Prunkard, Donna E.
; TITLE OF INVENTION: PROTEIN C PRODUCTION IN TRANSGENIC
TITLE OF INVENTION: ANIMALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: join(3520..3630, 5093..5117, 5210..5347, 5450 LOCATION: ..5584, 8253..8395, 9269..9386, 10516..11102)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 98102
ZIP: 98102
CMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 87.0%; Score 17.4; EBest Local Similarity 89.5%; Pred. No. 29; Matches 17; Conservative 1; Mismatches
  PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: PSSESEQ for Windows Version 4.0
SEQ ID NO 176107
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: ZymoGenetics, Inc.
1201 Eastlake Avenue East
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TLILUS JALE:
CLASSIFCATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sawielak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 95-28
TELEPHONE: 206-442-6672
TELEPHONE: 206-442-6678
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 11725 base pairs
TYPE: nucleic acid
TYPE: 11725 base pairs
TYPE: 11725 base pairs
TYPE: 11725 base pairs
TYPE: 11725 base pairs
                                                                                                                                                                                                                                                                                                                       523 GGCGCATGGCAAAGGGACC 505
                                                                                                                                                                                                                                                                                             1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: ZymoGenetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                            US-09-949-016-176107
                                                                                                                                     ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-756-506-1
```

1 GGCGCAUGGCUAAGGGACC 19

```
Sequence 50, Application US/09328925

Sequence 50, Application US/09328925

Betant No. 6610906

GENERAL INFORMATION:
APPLICANT: Kurachi, Kotoku
APPLICANT: Kurachi, Sumiko
TITLE OF INVENTION: Nucleotide Sequences for Gene Regulation and Methods of
TITLE OF INVENTION: Use Thereof
FILE REFERENCE: Um-03603
CURRENT APPLICATION NUMBER: US/09/328,925
CURRENT FILING DATE: 1999-06-09
NUMBER OF SEQ ID NOS: 84
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 50
LENGTH: 11725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4; Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 31, Application US/09054272
; Sequence 31, Application US/09054272
; Patent No. 6692909
; GENERAL INFORMATION:
    APPLICANT: Lander, Eric S.
    APPLICANT: Lander, Eric S.
    APPLICANT: Lander, George Q.
    APPLICANT: Ireland, James S.
    APPLICANT: Ireland, James S.
    APPLICANT: Ireland, James S.
    APPLICANT: OF INVENTION: CODING SEQUENCE POLYMORPHISMS
    TITLE OF INVENTION: IN VASCULAR PATHOLOGY GENES
    NUMBER OF SEQUENCES: 59
    CORRESPONDENCE ADDRESS:
    ADDRESSEE: HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
    STREET: Two Militia Drive
    CITY: Lexington
    COUNTY: USA
    ZIP: A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows 95
SOFTWARE: FastENG for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/054,272
FILING DATE: 01-APR-1998
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REPERENCE/DOCKET NUMBER: WHIE
TELECHOUNICATION INFORMATION:
TELEPHONE: 781-861-6240
TELEFAX: 781-861-9540
```

ö

```
RESULT 8

US-09-252-991A-14656/c

US-09-252-991A-14656/c

Sequence 14656, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:

APPLICANT: Marc J. Rubenfield et al.

ITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

CURRENT PELLOR DATE: 1999-02-18

PRIOR PELLOR TOWNBER: US 60/074,788

PRIOR FILING DATE: 1998-02-18

PRIOR FILING DATE: 1998-02-18

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 14656

LENGTH: 1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USACOURT 9-016-4833

Sequence 4833, Application US/09949016

Sequence 4833, Application US/09949016

Patent No. 6812339

Sequence 4833, Application US/09949016

Patent No. 6812339

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: G0/241,755

PRIOR APPLICATION NUMBER: G0/241,755

PRIOR PILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 4833
                           TYPE: DNA
ORGANISM: Peeudomonas aeruginosa
FEATURE:
NAME/KEY: unsure
LOCATION: (116)
CHER INCRMATION: Identity of nucleotide at the above locations are unknown.
US-09-252-991A-14778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION: Identity of nucleotide at the above locations are unknown
                                                                                                                                                                                                                                  79.0%; Score 15.8; DB 4; Length 1089; 84.2%; Pred. No. 1.4e+02; tive 1; Mismatches 2; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 79.0%; Score 15.8; DB 4; Best Local Similarity 84.2%; Pred. No. 1.5e+02; Matches 16; Conservative 1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                               189 GGCCCATGGCGAAGGGACC 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             136 GGCCCATGGCGAAGGGACC 118
                                                                                                                                                                                                                                                                                                                                                 1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                          Query Match
Best Local Similarity 84.2<sup>3</sup>
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: unsure
LOCATION: (63)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-252-991A-14656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PARCENTAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR PELICATION NUMBER: US 60/074,788
PRIOR PELICATION NUMBER: US 60/094,190
PRIOR FLIING DATE: 1998-02-18
PRIOR PELICATION NUMBER: US 60/094,190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

ITILE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CLOO1307

CURRENT APPLICATION NUMBER: US/09/949,016

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR PILING DATE: 2000-10-30

PRIOR PILING DATE: 2000-10-30

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                          DB 4; Length 11725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 4; Length 14802;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Score 17.4; DE; Pred. No. 29; 1; Mismatches
                                                                                                                                                                                                                                                                                              1; Mismatches
                                                                                                                                                                                                                                       Score 17.4;
Pred. No. 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16753
LENGTH: 14802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
US-09-252-991A-14778/c
; Sequence 14778, Application US/09252991A
; Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
8.09-949-016-16753/c
; Sequence 16753, Application US/09949016
; Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2247 GGCGCATGCCAAAGGGACC 2229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; LOCATION: (1)...(14802)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-16753
                                                                                                                                                                                                                                                                                                                                                                               877 GGCGCATGGCAAAGGGACC 859
                                                                                                                                                                                                                                                                                                                                                 1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGCGCAUGGCUAAGGGACC 19
; INFORMATION FOR SEQ ID NO: 31:
SEQUENCE CHARACTERISTICS:
LENGTH: 11725 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: Genomic DNA
US-09-054-272-31
                                                                                                                                                                                                                                       87.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 89.5%;
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 14778
                                                                                                                                                                                                                                          Query Match
Best Local Similarity 89.5
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
```

ô

Gape

ö

Length 1482; Indels ô

Gaps

ô

```
GENERAL INFORMATION:
APPLICANT: Singh, Mohan Bir;
APPLICANT: Smith, Penelope; and
APPLICANT: Knox, Robert Bruce
TITLE OF INVENTION: Protein Allergens of the Species Cynodon
TITLE OF INVENTION: Dactylon
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
                                                                                          76.0%; Score 15.2; DB 4; Length 601; 80.0%; Pred. No. 2.7e+02; ive 1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 76.0%; Score 15.2; DB 3; Best Local Similarity 80.0%; Pred. No. 2.8e+02; Matches 16; Conservative 1; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: RIOPPY disk
MEDIUM TYPE: RIOPPY disk
COMPUTER: BM PC compacible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: AGCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/41,507
FILING DATE: 15-May-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: 07/969,875
FILING DATE: 30-OCCODET-1992
ATTORNEY/AGENT INFORMATION:
NAME: MANGENT INFORMATION:
NAME: MANGENT STATES ANY E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMI-049DV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: LAHIVE & COCKFIELD LLP
28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             343 GCCGCATGCTCAAGCCACCC 324
                                                                                                                                                                                                                                          145 GGCCCAAGGCTGAGGGACCC 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Mandragourae, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-OF
TELECOMMUNICATION INPORMATION:
TELEFAX: (617) 722-7400
TELEFAX: (617) 722-7400
INPORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 662 Base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                               1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/08441507
Patent No. 6214358
                                                                                               Query Match
Best Local Similarity 80.04
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Boston
STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear. MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LOCATION: 1..435
US-08-441-507-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                               US-09-949-016-148214
; TYPE: DNA
; ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-07-969-875A-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                            US-08-441-507-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                      Sequence 16575, Application US/09949016
; Sequence 16575, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANTY VENTER, J. Craig et al.
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; FILE REFRENCE: CLOU3307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 2000-10-0
; SOFTWARE FREESEQ for Windows Version 4.0
; SEQ ID NO 16575
; LENGTH: 25198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-09-949-016-148214
j Sequence 148214, Application US/09949016
j Patent No. 6812139
j GENERAL INFORMATION:
j APPLICANT: VBTER, J Craig et al.
i TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
i TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
i TITLE OF INVENTION: WITH HUMAN BISEASE, METHODS OF DETECTION AND USES THEREOF;
i CURRENT APPLICATION NUMBER: US/09/949,016
i CURRENT FILING DATE: 2000-04-14
i PRIOR FILING DATE: 2000-10-03
j PRIOR PELICATION NUMBER: 60/231,768
i PRIOR PLILING DATE: 2000-10-03
j PRIOR APPLICATION NUMBER: 60/231,498
i PRIOR FILING DATE: 2000-10-03
j PRIOR APPLICATION NUMBER: 60/231,498
i PRIOR FILING DATE: 2000-09-08
i NUMBER OF SEQ ID NOS: 207012
i SOFTHARE: PESELSEQ for Windows Version 4.0
i SEQ ID NO 148214
                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.0%; Score 15.4; DB 4; Length 25198; 82.4%; Pred. No. 3.2e+02; tive 2; Mismatches 1; Indels 0;
                                                                                                                    77.0%; Score 15.4; DB 4; Length 3595; 82.4%; Pred. No. 2.6e+02; ive 2; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NAME/KEY: misc_feature
| LOCATION: (1)...(25198)
| CTHER INFORMATION: n = A,T,C or G
US-09-949-016-16575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2520 GCATGGCTGAGGGACCC 2536
                                                                                                                                                                                                                           4 GCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 GCAUGGCUAAGGGACCC 20
                                                                                                  Ouery Match
Best Local Similarity 82.41
Best Local 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 82.44
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-09-949-016-16575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Human
                                                    ORGANISM: Human
                                                                           US-09-949-016-4833
     LENGTH: 3595
```

```
RESULT 15
US-08-622-046B-2/c
    US-09-902-540-7911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: MI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-622-046B-2
                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NESULI 4.

US-09-902-540-7911/C

Sequence 7911, Application US/09902540

Sequence 7911, Application US/09902540

Sequence 7911, Application US/09902540

GENERAL INFORMATION:

APPLICANT: Hinkle, Gregory J.

APPLICANT: Wiegand, Roger C.

TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof

FILE REFERENCE: 38-10(18849)B

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: US/09/902,540

CURRENT FILING DATE: 2000-07-10

PRIOR FILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 16825

SEQ ID NO 7911

LENGTH: 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 15.2; DB 3; Length 662;
Pred. No. 2.8e+02;
                                    GENERAL INFORMATION:
APPLICANT: Singh, Mohan Bir;
APPLICANT: Singh, Mohan Bir;
APPLICANT: Smith, Penelope; and
APPLICANT: Smith, Penelope; and
TITLE OF INVENTION: Protein Allergens of the Species;
TITLE OF INVENTION: Cynodon Dactylon
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESSER: ImmuLogic Pharmaceutical Corporation
STREET: 610 Lincoln Street
CITY: Waltham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Mismatches
                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/969,875A
FILING DATE: 30-October-1992
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY AGENT INFORMATION:
NAME: Vanstone, Darlene A..
REGISTRATION NUMBER: 35,279
REPERBENCE/DOCKET NUMBER: 041.1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 466-6000
TELEPAX: (617) 466-6010
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 662 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              343 GGCGGATGGTGAAGGGACCC 324
Sequence 1, Application US/07969875A
Patent No. 6441157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 80.0%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Myxococcus xanthus
                                                                                                                                                                                                                                                                 CITY: Waltham
STATE: Massachusetts
COUNTRY: USA
ZIP: 02154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KEY: CDS
; LOCATION: 1..435
US-07-969-875A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                          Сарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
76.0%; Score 15.2; DB 4; Length 663; 80.0%; Pred. No. 2.8e+02; tive 1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 15.2; DB 3; Length 711; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Saedi, Mohammed S.
APPLICANT: Mikolajczyk, Stephen D.
TITLE OF INVENTION: Steble Variant HK2 Polypeptide
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSE: Schwegman, Lundberg, Woessner & Kluth, P.A.
STREET: P.O. BOX 2938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILING DATE: 26-MARCH-1996
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.0%; Sco...
75.0%; Pred. No. 2...
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 514
ATTORISY/AGENT INFORMATION:
NAME: Woesener, Warren D.
REGISTRATION NUMBER: 30,440
REPERENCE/DOCKET NUMBER: 476.001US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-373-6903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search completed: March 15, 2005, 15:26:39 Job time : 34.1579 secs
                                                                                                                                                                                                                            Sequence 2, Application US/08622046B Patent No. 6103237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 633 GCACATGCTCAGGCCCC 614
                                                                                   1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                        94 GGCGGATGGCGAAGGCACCC 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 612-339-3ve.
TELEFAX: 612-339-3ve.
TELEFAX: 612-339-3ve.
SEQUENCE CHARACTERISTICS:
LENGTH: 711 base pairs
TYPE: nucleic acid
corbandeDNESS: double
  Query Match
Best Local Similarity 80.0<sup>3</sup>
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: GO
```

THIS PAGE BLANK (USPTO)

603789355 ZUAHIZSTV RT0762 Ch AGENCOURT BB152189 170006870 MR3-007000 BY625660 BY625660 BY625660 BY61476 EST03587 EST03587 EST03587 EST03587 EST0362 R

ALIGNMENTS

AA989300 BY614776 BQ494421 CD568026 CB787029

AQ588920

BX847762 BGG69840 BCG69840 CNS01110 CNS01110 CC495546 CV432546 CV432546 CV432546 BM602859 BM602859 BM602859 BM602859 BM61878056 BY62666 BY62666 BY618930 BY61874 BX61874 BX618

CNS501110 BU361862 CCQ395546 CCQ355461 CO395649 BB152189 BM602055 BY626060 BY635564 BX619468

2005	
0:42:50	
16 10	
Wed Mar	
.≊	

```
υυ
                                                                                                      υυυ
                                                                                                                                                                                                                                                                                                                                                                       BH090915 RPCI-24-2
AZ844319 ZN0143CI7
BF884568 CM2-ET019
H49655 YQ20h07.81
BH101439 RPCI-24-3
AZ901413 RPCI-24-1
AZ91672 ZM0041L08
BP446790 BP446790
AIZ3177 EST229865
CN363134 4117714 B
BE88239 6015,06306
CN365119 17000599
CR277771 FORWAZA B
BI329017 602980410
CR97771 FORWAZA B
BI329017 602980410
CR951668 AGBNCOURT
CB961961 AGENCOURT
CB961668 AGBNCOURT
BE619299 601473181
BU656404 AGENCOURT
                                                March 15, 2005, 10:06:47; Search time 868.86 Seconds (without alignments) 876.189 Million cell updates/sec
                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                   68479088
       GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                  34239544 segs, 19032134700 residues
                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                     nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                         BH090915

AZ844319

BH84568

H49655

BH101433

AZ901413

AZ901413
                                                                                               1 ggcgcauggcuaagggaccc 20
                                                                                                            IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                             US-09-699-667E-64
20
                                                                                                                                                                                                                                                                                                                                                          Length DB
                                                                                                                                                                                                                            9b_est1::
9b_est2::*
9b_htc::*
9b_est4::*
9b_est4::*
9b_9ss1::*
                                                                                                                                                                                                                                                                                                                                                                                                              EST:*
                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                •
                                    OM nucleic
                                                                                               Sequence:
                                                                                                                                    Searched:
                                                                                                                                                                                                                      Database
                                                  Run on:
                                                                                                                                                                                                                                                                                                                                                                                                  Result
                                                                                                                                                                                                                                                                                                                                                                         00000
                                                                                                                                                                                                                                                                                                                                                                                                                      υ
```

RESULT 1 BH090915	RESULT 1 BH090915/c	
rocas		BH090915 519 bp DNA linear GSS 18-JUL-2001
DEFIN	DEFINITION	genomic clone
		RPCI-24-281E19, genomic survey sequence.
ACCES	ACCESSION	
VERSION	NO	BH090915.1 GI:14910820
KEYWORDS	JRDS	GSS.
SOURC	ORGANISM	Mus musculus (nouse mouse)
		Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
		Rodentia;
REFER	REFERENCE	1 (bases 1 to 519)
AUT	AUTHORS	Zhao, S., Nierman, W., Malek, J., Shatsman, S., Akinret, B., Levins, M.,
		Tsegaye, G., Geer, K., Krol, M., Shvartsbeyn, A., Gebregeorgis, E.,
Ė		Russell, D., de Jong, P. and Fraser, C.M.
TITLE	TITLE	Mouse bac End Sequences Irom Library RPCI-24
COMMENT	TNE	Onbor GSSs: RPC1-24-281R19 T.I
	•	Contact: Shaving Zhao
		Department of Bukaryotic Genomics
		The Institute for Genomic Research
		9712 Medical Center Dr., Rockville, MD 20850, USA
		Tel: 301 838 0200
-		Fax: 301 838 0208
		org
		Clones are derived from the mouse BAC library RPCI-24. For BAC
		library availability, please contact Pieter de Jong
		(pdejong@mail.cho.org). Clones may be purchased from BACPAC
		Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC end
		<pre>page: http://ww .tigr.org/tdb/bac_ends/mouse/bac_end_intro.html</pre>
_		Plate: 281 row: E column: 19
		Seq primer: T7
		Class: BAC ends.
FEATURES	RES	Location/Qualifiers
	source	
		/organism="Mus musculus"
		/mol_type="genomic DNA"
		/strain="C57BL/6J"
		/db_xref="taxon:10090"
•		/clone="RPCI-24-281E19"
		/BEXE-MAIRS
		/cerr_cype= upreem/pramm /clone lib="RPCI-24"
		/note="Vector: DTARBAC1; Site 1: BamH1; Site 2: BamH1;
		RPCI-24 Mouse BAC Library produced by Pieter de Jong. The
_		library was cloned in the pTARBAC1 cloning vector at the

BU846054 AGENCOURT BQ070932 AGENCOURT BZ562536 pacs2-164 BG02312 df10c01.y BF231936 df10c01.x CK428113 laj10907.

υ

טט

υ

ORIGIN

셤

```
/dev_erage="Adult"

/clone lib="Er013"

/note="Organ: lung_tumor; Vector: puc18; Site 1: Smal;

Site 2: Smal; A mini-library was made by cloning products

derived from ORESTES PCR (U.S. Letters Patent application

No. 196,716 - Ludwig Institute for Cancer Research)

profiles into the puc 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases I to 394)
Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                      BF884568 394 bp mRNA linear EST 17-JAN-2001
CM2-ET0193-261200-654-h08 ET0193 Homo sapiens CDNA, mRNA sequence.
BF884568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=CM2&t2=CM2-ET0193-261200-654-h08&t3=2000-12-26&t4=1)
chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rus Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                     Gaps
                                                                                                                                                  ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence tags
Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 394;
                                                                                                     Length 240;
                                                                                                                                                  Indels
                                                                                                       1.16+03;
                                                                                                  84.0%; Score 16.8; DB 8;
80.0%; Pred. No. 1.1e+03;
ive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 16.8; DB 2;
Pred. No. 1.1e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.0%; Scc...
80.0%; Pred. No. 1...
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         low stringency conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 384
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179 GGCGCATGGCTTAGAGACCC 160
                                                                                                                                                                                                                              121 GGGCATGCTCAGGGACCC 102
                                                                                                                                                                                                   1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                              BF884568.1 GI:12274717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                     16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                Query Match
Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
nes 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                            RESULT 3
BF884568/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                       DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (http://www.jax.org/resources/documents/dhares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polymucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pWD42 (gi|q192114|gb|APL29072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Б
                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                          GSS 20-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 240)
Dunn, D., Aoyaqi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, B., Pedersen, T., Nese, M., Rose, R., Stockes, R., Tingey, A., von Niederhausern, A. and Wright, D., Weiss, R.
                                                                                                                                                                                                                                                                                                                                                                          AZ844319
2M0143C17R Mouse 10kb plasmid UUGC1M library Mus musculus genomic clone UUGC2M0143C17 R, genomic survey sequence.
     partially digested male C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gex="Male"
/lab host="E. Coli strain XL10-Gold, Tl-resistant, F-"
/clone lib="Mouse 10kb plasmid UUGCIM library"
/note="Vector: PWD42nv, Purified genomic DNA from M.
musculus C57BL/6J (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   plasmid inserts
Unpublished (2000)
Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC,
                                                                                                                                                        Gaps
                                                                                                                                                        ;
0
                                                                                                                                                        1; Indels
                                                                                                     Length
                                                                                                     Score 17.4; DB 8;
Pred. No. 5.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0143 row: C column: 17
Seq primer: CACACAGGAAACAGCTATGACC
Class: plaemid ends
High quality sequence stop: 240.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory Mouse DNA Resource
                                                                                                                                                     2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .240
/organism="Mus musculus"
/organism="Sorganis DNA"
/strain="C57BL/6J"
/db xref="taxon:10090"
/clone="UUGC2M0143C17"
       BamHl sites using MboI
DNA."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                                 ||||||:|||:|||| |||
127 GGCGCATGGCTAAGGAACC 109
                                                                                                                                                                                                     1 GGCGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AZ844319.1 GI:13014227
                                                                                                       87.0%;
                                                                                                     Query Match 87.0
Best Local Similarity 84.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AZ844319
                                                                                                                                                                                                                                                                                                                            RESULT 2
AZ844319/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
```

TITLE

COMMENT

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL COMMENT

DEFINITION

RESULT 4 H49655/c LOCUS

ACCESSION

**JERSION** 

```
La (Dabes 1 to 471)

Shao, S., Nierman, W., Malek, J., Shatsman, S., Akinret, B., Levins, M., Tsegaye, G., Geer, K., Krol, M., Shvartsbeyn, A., Gebregeorgis, E., Russell, D., de Jong, P. and Fraser, C.M.

Russell, D., de Jong, P. and Fraser, C.M.

Mouse BAC End Sequences from Library RPCI-24

Unpublished (1999)

Other GSSS: REC1-24-304P16.TV

Contact: Shaying Zhao

Department of Eukaryotic Genomics

The Institute for Genomic Research

9712 Medical Center Dr., Rockville, MD 20850, USA

Tel: 301 838 0200

Fax: 301 838 0200

Fax: 301 838 0200

Email: szhao@tigr.org

Clones are derived from the mouse BAC library RPCI-24. For BAC

Clones are derived from the mouse BAC library RPCI-24. For BAC

Clones are derived from the mouse BAC library RPCI-24. For BAC

Clones are derived from the contact Pieter de Jong

(pdejong@mail.cho.org)

Clones may be purchased from BACPAC

Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC end

Page: http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html

Plate: 304 row: P column: 16

Seq primer: Sp6

Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cell_type="Spleen/Brain"
/clone_lib="RRCI-24"
/note="Vector: pTARBAC1; Site_1: BamH1; Site_2: BamH1;
RPCI-24 Mouse BAC Library produced by Pieter de Jong. The
library was cloned in the pTARBAC1 cloning vector at the
BamH1 sites using MboI partially digested male C57BL/6J
DNA."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1. (bases 1 to 492)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhao, S., Nierman, W., Malek, J., Shatsman, S., Akinret, B., Levins, M., Tsegaye, G., Geer, K., Krol, M., Shvartsbeyn, A., Gebregeorgis, E., Russell, D., de Jong, P. and Fraser, C. M. Mouse End Sequences from Library RPCI-24 Unpublished (1999)
Other_GSSs: RPCI-24-154A19.TJ
                                                                         Mus musculus
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 471)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84.0%; Score 16.8; DB 8; Length 471;
80.0%; Pred. No. 1.2e+03;
ive 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPCI-24-154A19.TV RPCI-24 Mus musculus genomic clone RPCI-24-154A19, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
/clone="RPCI-24-304P16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               492 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 415 GGAGCGTGGCTAAGGGACCC 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGCGCAUGGCUAAGGGACCC 20
  GI:14926316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AZ901413.1 GI:13220358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
  BH101439.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AZ901413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AZ901413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                        REFERENCE
                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
AZ901413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 468 bp mRNA linear EST 22-JAN-1999
yd20h07.sl Soares fetal liver spleen INFLS Homo sapiens cDNA clone
IMAGE:274428 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GSS 19-JUL-2001
                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 468)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Hulenn,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rikkin,L., Parsons,J., Tak,M., Tan,F., Tare,M., Tan,F., Tan,F., Tan,F., Tan,F., Tan,F., Tan,F., Tan,F., Tan,F., Materston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insert Sizes 955
High quality sequence stops: 345
High quality sequence stops: 345
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 955
Seq primer: Promega -21ml3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The Washu-Merck EST Project Unpublished (1995)
Unpublished (1995)
Contact: Wison RK
Washington University School of Medicine
4444 Porcet Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRCI-24-304P16.TJ RPCI-24 Mus musculus genomic clone RPCI-24-304P16, genomic survey sequence.
BH101439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.0%; Score 16.8; DB 7;
80.0%; Pred. No. 1.2e+03;
iive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .468
/organism="Homo sapiens"
/mol_type="mkny"
/db_xxef="dDB:3798235"
/db_xxef="taxon:9606"
/clone="IMAGE:274428"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 345.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               380 GGCGCATGGCTTAGAGACCC 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male"
                                                                                                                                                                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                  H49655.1 GI:989496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 80.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilson, R
                                                                                                                                                                             H49655
```

PEATURES

ö

Gaps :. 0 GSS 05-MAR-2001

BH101439/c DEFINITION

RESULT 5

g

ORIGIN

ACCESSION

```
Query Match
Best Local Similarity
Matches 16; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP446790
                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AZ791672 S16-FEB-2001
2M0041L08R Mouse 10kb plasmid UUGCIM library Mus musculus genomic
clone UUGC2M0041L08 R, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                   Email: stacocitions of the mouse BAC library RPCI-24. For BAC llones are derived from the mouse BAC library RPCI-24. For BAC library availability, please contact Pieter de Jong (bpd-jong@mail.cho.org). Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC end page: http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html Seq primer: T7
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                            /gex="Male" (cell type="Spleen/Brain" (cell type="Spleen/Brain" (clone lib="RPCI-24" (note="Vector: pTARBAC1; Site 1: BamH1; Site_2: BamH1; Anote="Vector: pTARBAC1; Site 1: BamH1; SPCI-24 Mouse BAC Library produced by Pieter de Jong. The library was cloned in the pTARBAC1 cloning vector at the BamH1 sites using MboI partially digested male CS7BL/6J DNA."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Indels
Contact: Shaying Zhao
Department of Bukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0200
Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84.0%; Score 16.8; DB 8;
80.0%; Pred. No. 1.2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0041 row: L column: 08
Seq primer: CACACAGGAAACAGCTATGACC
Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2; Mismatches
                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
/clone="RPCI-24-154A19"
                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               162 GGAGCATGGCTAAGGGAGCC 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AZ791672.1 GI:12934808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16; Conservative
                                                                                                                                                                                                                                                                                          1. .492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AZ791672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AZ791672/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
```

셤

```
/gax="Male" | Jeas="Cools strain XL10-Gold, T1-resistant, F-" | Jab_host="E. Coli strain XL10-Gold, T1-resistant, F-" | Jab_host="E. Coli strain XL10-Gold, T1-resistant, F-" | Jeab_host="Rector: PWDADIN; Purified genomic DNA from M. | Musculus C57BL/6J (male) was obtained from the Jackson Laboratory Mouse DNA Resource | Musculus C57BL/6J (male) was obtained from the Jackson | Laboratory Mouse DNA Resource | Musculus C57BL/6J (male) was blunced from constant velocity. The sheared DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with TA DNA polymerase and T4 polymucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gelectrophoresis. Vector DNA was prepared from a derivative of phasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coli XL10-Gold (stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP446790 aRNA linear EST 30-DEC-2003 BP446790 full-length enriched swine cDNA library, adult liver Sus scrofa cDNA clone LVR010038G07 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vector sequences were eliminated by RepeatMasker version 2002/07/13 and crossmatch version 0.990319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Single pags sequencing of clones derived from oligo-capped cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.0%; Score 16.8; DB 8; Length 514;
80.0%; Pred. No. 1.2e+03;
tive 2; Mismatches 2; Indels (
                                                                             'organism="Mus musculus"
High quality sequence stop: 514.
Location/Qualifiers
                                                                                                          /mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                             db xref="taxon:10090"
clone="UUGC2M0041L08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322 GGGCATGCTCAGGGACCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP446790.1 GI:40436857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sus scrofa (pig)
Sus scrofa
```

```
3GAL 13E17 5', mRNA sequence.
CN383794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BE885239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
BE885239/c
                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                   /organism="Sus scrofa"
/mol_type="mRNA"
/db xref="texcn:9823"
/clone="LVR010038G07"
/tissue type="liver"
/dev_stage="adult"
/clone_lib="full-length enriched swine cDNA library, adult liver"
                                                                                                                                                                                                                                                                                                                                                                            S57 bp mRNA linear EST 31-JAN-1999 EST229865 Normalized rat kidney, Bento Soares Rattus sp. cDNA clone RKICL81 3' end, mRNA sequence.
                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CN383794 EST 01-OCT-2004 4117714 BARC_3GAL chicken mixed tissue Gallus gallus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 557)
Loe, N.H., Glodek, A., Chandra, I., Mason, T.M., Quackenbush, J.,
Kerlavage, A.R. and Adams, M.D.
Rat Genome Project: Generation of a Rat EST (REST) Catalog & Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Normalized rat kidney, Bento Soares"
/note="Organ: kidney; Vector: pT7T3Pac; Site_1: EcoRI;
Site_2: NotI"
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
     Low quality bases were trimmed based on the quality values.
Location/Qualifiers
1. .555
                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                  Length 555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Lee, NH
The Institute for Genomic Research
9712, Medical Center Drive, Rockville, MD 20850, USA
Th1: (301) -838-3529
Fax: (301) -838-0208
Email: nhle@digr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.0%; Score 16.8; DB 1; Length 5
80.0%; Pred. No. 1.2e+03;
ive 2; Mismatches 2; Indele
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                84.0%; Score 16.8; DB 5;
80.0%; Pred. No. 1.2e+03;
iive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Rattus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   286 GGGCATGGCTCAGGGACCC 305
                                                                                                                                                                                                                                                                                                  115 GGCGCATGGCTTAGGGACGC 134
                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AI233177.1 GI:3817057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seg primer: M13-21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1998)
                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                              Best Local Similarity
Matches 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                             AI233177
                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CN383794
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                              RESULT 9
AI233177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                     PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

```
/organism="Gallus gallus"
/mol_type="mRNA"
/strain="Leghorn and broiler"
/db_xref="taxon:9031"
/clone="3GAL 13E17"
/lab_host="Piffsalpha"
/clone lib="PRASON:3GAL chicken mixed tissue"
/clone lib="PRASON: Jake chicken mixed tissue"
/clone lib="PRASON: Jake chicken mixed tissue"
/clone lib="RANC Jake chicken mixed tissue"
/clone lib="PRASON: Jake chicken
                                                                                                                                                                                                                Eukaryoča; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves. Neognathae; Galliformes; Phasianidae; Phasianinae; Gallia; (Galliformes); Dasianinae; Gallia; (Galliformes); I (bases 1 to 568)

Evock-Clovey.C.M., Ashwell,C.M., McMurtry,J.P., Lillehoj,H.S., Matukumalli,L.K. and Van Tassell,C.P.

Characterization of expressed sequence tags generated from multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ввивъззу
601506306F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3908089 5',
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Single pass sequencing named and trimmed with phred 0.000925 using options -trim_alt " -trim_fasta. Vector identified by cross match using options -minmatch 12 -minscore 18 late: 13 row. E column: 17 Seq primer: CCAGACTCACAGTTGTAAAACG High quality sequence stop: 568.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

1. (bases 1 to 597)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chicken tissues
Unpublished (2004)
Unpublished (2004)
Christina M. Clover
Growth Biology Laboratory
Animal and Natural Resources Institute
Bidg. 200 Rm215 BARC-East, Beltsville, MD 20705, USA
Tel: 3015048224
Fax: 3015048623
Email: chrisc@anri.barc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84.0%; Score 16.8; DB 7;
80.0%; Pred. No. 1.2e+03;
iive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      504 GGCGCATGGCTAAAGGGCCC 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GCCGCAUGGCUAAGGGACCC 20
CN383794.1 GI:53550640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BE885239.1 GI:10334015
                                                                                                        Gallus gallus (chicken)
Gallus gallus
```

20

```
1 GGCGCAUGGCUAAGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BI329017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
BI329017/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                               RESULT 13
CR277771/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
    ઠે
                                                                                                                                                                                                                                                                                                                         1. :597
| contains the contains of the contain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1..634.//
forganism="Homo sapiens"
// fissue_type="mnbryonic stem cell, retinoic acid and mitogen-treated has cell line H7"
// folone_lib="GNN PRENBU"
// folone lib="GNN PRENBU"
/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CN369119 634 bp mRNA linear EST 16-MAY-2004
17000599936909 GRN_PRENEU Homo sapiens CDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prandenberger, R., T., Wei, H., Zhang, S., Lei, S., Murage, J., Fisk, G.J., Li, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Lebkowski, J and Stanton, L.W.
Lebkowski, J and Stanton, L.W.
Transcriptome characterization elucidates signaling networks that control human Es cell growth and differentiation
Nat. Biotechnol. 22 (8), 707-716 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.lnl.gov.
Plate: LLAM9719 row: k column: 02
High quality sequence stop: 420.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84.0%; Score 16.8; DB 7; Length 634;
80.0%; Pred. No. 1.2e+03;
iive 2; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Geron Corporation
230 Constitution Drive, Menlo Park, CA 94025, USA
Tel: 650 473 8658
Fax: 650 473 7760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match

84.0%; Score 16.8; DB 2;
Best Local Similarity 80.0%; Pred. No. 1.2e+03;
Matches 16; Conservative 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: rbrandenberger@geron.com
Insert Length: 634 Std Error: 0.00.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            551 GGCACATGGCTTAGGGACCC 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GCCCCAUGCCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CN369119.1 GI:47369053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Regenerative Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 634)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 80.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CN369119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
CN369119
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.

2E 1 (Dases 1 to 757)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

Contact: Robert Strausberg, Ph.D.

Email: Capaba-romail.nih.gov

Tissue Procurement: Jeffrey E. Green, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CLONE distribution: MGC Clone distribution information can be found through the I.M.A.G.E. Consortium/LiML at:

High quality sequence start: 2

High quality sequence start: 2

High quality sequence start: 2

High quality sequence stop: 724.
                                                                                                                                                                                                    CR277771 109 bp DNA linear GSS 06-JUL-2004 Forward strand read from insert in 5'HPRT insertion targeting and chromosome engineering clone MHPN406h24, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 709)
Adams, D.J., Biggs, P.J., Cox, A.V., Davies, R.M., van der Weyden, L.,
Adams, D.J., Smith, J., Plumb, R.W., Taylor, R.G., Nishijima, I., Yu, Y.,
Rogers, J. and Bradley, A.
Direct Submission
Submitted (20-FEB-2004) Sanger Centre, Hinxton, Cambridgeshire,
CB10 1SA, UK. http://www.sanger.ac.uk/MICER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI329017 757 bp mRNA linear EST 30-JUL-2001 602980410F1 NCI_CGAP_Li9 Mus musculus cDNA clone IMAGE:5133243 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 709;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84.0%; Score 16.8; DB 9;
80.0%; Pred. No. 1.2e+03;
ive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                    CR27771.1 GI:50056748
GSS; genome survey sequence; MICER.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .709
/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="WHIPN406h24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
158 GGCGCATGGCTTAGGGACGC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360 GGAGCGTGGCTAAGGGACCC 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BI329017.1 GI:15013674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 80.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bource
```

us-09-699-667e-64.std.rst

```
5'-TTTTTTTTTTTTTTTVN-3', size selected for average insert size 2.3 kb and normalized to ROT 5. This is a primary library enriched for full-lenght clones and constructed using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 29-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs remail.nih.gov
Tissue Procurement: Dr. Stefan Hansson
CDNA Library Preparation: Wichael J. Brownstein (NHGRI) with help
and advice from Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bloscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
Plate: NDAM32 row: o column: 08
High quality sequence stop: 582.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 825)
NIH-MGC http://mgc.nci.nih.gov/.
NIH-MGC http://mgc.nci.nih.gov/.
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
/mol_type="mRNA"
/strain="FVB/N"
/db_xref="taxon:10090"
/db_xref="taxon:10090"
/clone="lMAGE:5133243"
/lab_host="NH10B (TI phage-resistant)"
/clone=lib="NCI CGAP_Li9"
/clone=lib="NCI CGAP_Li9"
/note="Organ: ITver; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally, Primer: Oligo dT.
Average insert size 1.9 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="NIH MGC 148"
/note="Organ: placenta; Vector: pBluescriptR; Site 1:
all.Xhol; Site 2: BamH; Library is oligo-dT primed and
directionally cloned using primer
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CB961961
AGENCOURT_13665758 NIH_MGC_148 Homo sapiens cDNA clone
IMAGE:30349111 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                    84.0%; Score 16.8; DB 4; Length 757; 85.0%; Pred. No. 1.2e+03; tive 1; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:30349111"
/tissue_type="pre-eclamptic placenta"
/lab_hoft="DH10B TonA"
                                                                                                                                                                                                                                                                                                                                                                                                       CB961961.1 GI:30218078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                        17, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 17, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CB961961
                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
CB961961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

ö

Gaps

ö

84.0%; Score 16.8; DB 6; Length 825; 80.0%; Pred. No. 1.2e+03; iive 2; Mismatches 2; Indels

Best Local Similarity 80.0 Matches 16; Conservative

Query Match

```
144 GGCGCATGGCTTAGGGACGC 163
1 GCCCAUGCUAAGCGACCC 20
                g
ò
```

Search completed: March 15, 2005, 15:20:34 Job time: 875.86 secs

THIS PAGE BLANK (uspra)

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

OM nucleic - nucleic search, using sw model Run on:

March 15, 2005, 15:20:59 ; Search time 1488.44 Seconds (without alignments) 946.212 Million cell updates/sec

US-09-699-667E-65 37 Title: Perfect score: Sequence:

1 ggguccaccuccucgcggunnnnnnngggcaugcsby 37

IDENTITY\_NUCDX
Gapop 10.0 , Gapext 1.0 Scoring table:

34239544 seqs, 19032134700 residues Searched:

241816 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 60

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

EST: \* Database :

99b est1: 99b est2: 99b est3: 99b est43: 99b est6: 90b 9881: 90b 9881:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Ę	HO.	zr69a04.8	1007034B0	AU104848	Forward s	Reverse s	1123021A1	H23825 yn71e03.81	1M0390K23	50072-2-7	of85b02.8	W269A01 G	tx20f12.x	ot44g10.8	T. brucei	02S0288-0	wa83d03.x	TN0390 KR	Reverse s	T. brucei	1008106H0	AST-DHP (4	NISC ko05	vv80e11.r	SBF_142 G
	10000	Description	AA232965	BH413716	AU104848	CR002872	CR101542	CG774833	H23825 yr	AZ585629	BM395132	AA878748	CL214958	AI612870	AA993587	AL481441	CL234247	AI688077	AW063221	CR021509	AL493595	BH803980	AZ537682	BQ256702	AA762539	CD952940
IES																			•							
SUMMARIES	Ę	10	AA232965	BH413716	AU104848	CR002872	CR101542	CG774833	H23825	AZ585629	BM395132	AA878748	CL214958	AI612870	AA993587	TA234D12P	CL234247	A1688077	AW063221	CR021509	TA348B10P	BH803980	AZ537682	BQ256702	AA762539	CD952940
	9	9 :	н	œ	Н	σ	σ	σ	۲	œ	4	7	σ	ч	٦	σ	σ		N	თ	σ	æ	Φ	ഗ	ч	9
	Query Match Length	rengen	55	51	20	53	58	43	49	43	45	49	53	28	49	55	57	31	26	20	57	28	41	57	9	60
de	Query	March	64.3	61.6	61.1	61.1	61.1	60.5	60.5	58.9	58.9	58.9	58.4	58.4	57.3	57.3	57.3	56.8	56.8	56.2	56.2	56.2	55.7	55.7	55.7	55.7
	9	arone	23.8	22.8	22.6	22.6	22.6	22.4	22.4	21.8	21.8	21.8	21.6	21.6	21.2	21.2	21.2	21	21	20.8	20.8	20.8	20.6	20.6	20.6	20.6
	Result	. i	н	0	٣	4	Ŋ	9	7	8	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Res	:	υ	υ	U		υ					υ	υ	υ	υ			υ	υ	O	U	υ	υ	υ	υ	

AIS84193 £b82a03.x BT094799 EST-CD34N AU104597 AU104597 AU104642 AU104642	AU104689 AU104689 AA661787 ak35d10.s CB214675 OML04955 AZ458661 1M0262022	CL791728 RRZ340 Ba AAS30920 1147405.8 AG194008 Pan trog1 AA770617 oe54402.8	AU105257 AU105257 CN446714 t149b03 5 BH630396 1007088C0 CB058194 NISC_JX01 &2340626 1M0007209	
34 1 AIS84193 48 4 BIO94799 50 1 AU104597 50 1 AU104642	50 1 AU104689 55 1 AA861787 55 6 CB214675 55 8 AZ458661	41 9 CL791728 43 1 AA530920 45 9 AG194008 46 1 AA770617	50 1 AU105257 50 7 CN446714 52 8 BHG30396 54 6 CB058194	o 0 1 0 0
20.4 55.1 20.4 55.1 20.4 55.1 20.4 55.1		20.2 54.6 20.2 54.6 20.2 54.6 20.2 54.6		20 54.1 20 54.1 20 54.1 20 54.1
25 26 27 28	0 3 3 0 3 3 0 3 3 5 0 0 0 0 0 0 0 0 0 0	ດ ດ ສູສສ ຊູສສ	0000 38 98 98 98	0 444 443 6443

## ALIGNMENTS

RESULT 1 AA232965/c	Ef hy minny linear Dom
DEFINITION	A4332965 zr69a04.81 Soares NhHMPu_S1 Homo sapiens cDNA clone IMAGE:668622 3' similar to SW:UCRX_BOVIN P00130 UBIQUINOL-CYTOCHROWE C REDUCTASE
ACCESSION VERSION	AA232965 Born 101:1856126
SOURCE	bos. Homo sapiens (human)
HS I MESONO	
REFERENCE	Bowles.1
	, Martin, J Theising,
TITLE	White Y., Wylie, T., Waterston, R. and Wilson, R. WashU-Merck EST Project 1997
COMMENT	Ontact: Wilson RK
	Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
	Fax: 314 286 1810 Email: est@watson.wustl.edu
	This clone is available royalty-free through LLNL; contact the
	Trace considered overall poor quality
	Possible reversed clone: similarity on wrong strand
	Insert Length: 560 Std Brror: 0.00
	seq pirmer: -41m13 rwd. El Lom Amersham High quality sequence stop: 1.
FEATURES	Location/Qualifiers
source	cc/organism="Homo gapiens"
	/ organization of the control of the
	/ db_xref="taxon:9606"
	1 1 1 1
	/tissue_type="Footed numan metanocyte, retal neart, and pregnant uterus"
	/lab_host="DH10B" /clone_lih="Soares_NhHMPn_S1"
	/note="Organ: mixed (see below); Vector: pT7T3D-Pac
	Site_2: Eco RI; Equal amounts of plasmid DNA from three

Gaps

ö

EST 28-JAN-2004

```
Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
Institute of Medical Science, University of Tokyo
Bail: Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Bmail: ysuzuki@ims.u-tokyo.ac.jp
Suzuki,Y., Yoshitomo-Nakagawa,K., Maruyama,K., Suyama,A. and
Sugano,S. Construction and characterization of a full
length-enriched and a 5'-end-enriched cDNA library. Gene 200 (1-2),
149-156 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota, Metazoa; Chordata, Craniata, Vertebrata, Buteleostomi; Mamalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 5)
Adams, D.J., Biggs, P.J., Cox, A.V., Davies, R.M., van der Weyden, L., Jonkerse, J., Smith, J., Plumb, R.W., Taylor, R.G., Nishijima, I., Yu, Y., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Forward strand read from insert in 5'HPRT insertion targeting and chromosome engineering clone MHPN206d11, genomic survey sequence. CR002872.1 GI:49735863 GSS, genome survey sequence, MLBR. Mus musculus (house mouse)
                                                                                                                                                                                                                                                                   50 bp mRNA linear EST 28-JAN-200
1104848 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone
HRC05037, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 50)

Suzuki, Y., Taira, H., Tsunoda, T., Mizushima-Sugano, J., Sese, J., Hata, H., Ota, T., Isogai, T., Tanaka, T., Morishita, S., Okubo, K., Sakaki, Y., Nakamura, Y., Suyama, A. and Sugano, S.

Diverse transcriptional initiation revealed by fine, large-scale mapping of mRNA start sites

BEND Rep. 2 (5), 388-393 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (20-PEB-2004) Sanger Centre, Hinxton, Cambridgeshire,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="HRC05037"
/clone_lib="Sugano Homo sapiens cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61.1%; Score 22.6; DB 1;
45.7%; Pred. No. 1.1e+05;
tive 12; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGUCCACCUCGCGGGUNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GETCGCCGCCTGCCGGTCGGGGGGGAACGCCG 14
                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                        13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .50
/organism≃"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                  AU104848.1 GI:13554369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16; Conservative
      15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 16; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                AU104848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11375929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21270072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                 RESULT 3
AU104848/c
                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
          Matches
                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CR002872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                      ઠે
                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /unit type="genomic DNA"
/cultivar="mixed background W23/A188/B73"
/du xref="taxon:4577"
/de xref="taxon:4577"
/fisue type="laaf"
/dev stage="adult"
/dev stage="adul
normalized libraries (melanocyte 2NDHM, pregnant uterus NDHPU, and fetal heart NDHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5.00 clones made from the same 3 libraries. The pools consisted of I.M.A.G.B. clones 260232-265223,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BH413716 51 bp DNA linear GSS 12-DEC-2001 1007034B01.2EL x1 1007 - RescueMu Grid H Zea mays genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maize genomic sequences found using engineered RescueMu transposon Unpublished (2001) Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopaida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: walbordstanford.edu
Possible ligation site of ends cut by 2 different endonucleases.
Reverse complemented post-ligation sequence from source sequence.
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                             Query Match 64.3%; Score 23.8; DB 1; Length 55; Best Local Similarity 45.7%; Pred. No. 4e+04; Matches 16; Conservative 13; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              855 California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2227
Fax: 650 725 8221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 22.8; DB 8;
Pred. No. 9.3e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department of Biological Sciences
Stanford University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: 1007034 column: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Class: transposon-tagged
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:17590275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 51)
Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BH413716.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BH413716
```

VERSION KEYWORDS SOURCE ORGANISM

ACCESSION

TITLE JOURNAL REFERENCE AUTHORS

COMMENT

FEATURES

BH413716/c LOCUS

ઠ 셤

ORIGIN

ö

Gaps

ö

50;

GSS 05-JUL-2004

```
Class: transposon-tagged.
Location/Qualifiers
                                                                                                                                                                                                                                 organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H23825.1 GI:892520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 43.8
es 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT '
 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US / /4833 SEL X1 1123 - RescueMu Grid L Zea mays genomic, genomic survey sequence.
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                            GSS 05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. (Bases 1 to 58)
Adams, D.J., Biggs, D.J., Cox, A.V., Davies, R.M., van der Weyden, L., Jonkers, J., Smith, J., Plumb, R.W., Taylor, R.G., Nishijima, I., Yu, Y., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoldeae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maize genomic sequences found using engineered RescueMu transposon
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                            CR101542 158 05-JUL-200 Reverse strand read from insert in 3'HPRT insertion targeting and chromosome engineering clone MHPP224418, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (20-FEB-2004) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. http://www.sanger.ac.uk/MICER Location/Qualifiers
                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                           Query Match 61.1%; Score 22.6; DB 9; Length 53; Best Local Similarity 51.4%; Pred. No. 1.1e+05; Matches 19; Conservative 10; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
UK. http://www.sanger.ac.uk/MICER
Location/Qualifiers
                                                                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61.1%; Score 22.6; DB 9;
40.5%; Pred. No. 1.1e+05;
iive 14; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44 GGGACAACTTCCTGGCCTTTTGATTAGGCCATGACCC 8
                                                 /organism="Mus musculus"
mol_type="genomic DNA"
/db_xref="texon:10090"
/clone="WHPN206d11"
/clone_lib="WHPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS; genome survey sequence; MICER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="MHPP224d18"
/clone_lib="MHPP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CR101542.1 GI:49848942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CG774833.1 GI:38031262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 40.53
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 43)
                                      . 53
CB10 1SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                 CR101542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CG774833
                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                           RESULT 5
CR101542/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
CG774833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
```

```
Mu elements insert preferentially into transcription units. For more information on RescueMu, go to the web selte 'www.zmdb.iastete.edu' and follow the links for 'RescueMu'. Grid L was grown in Molokai in 2001. DNA was extracted from leaf strips, double digested using BamHI and Bill, and ligated to form circular plasmids. DH10B cells were transformed and then screened on LB plates with ampicillin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 06-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="leaf"
/dev stage="adult"
/lab_host="DH108"
/clone lib="ll123 - RescueMu Grid L"
/note="Organ: leaf; Vector: RescueMu (engineered from pBlueScript backbone); Site 1: BamHI; Site 2: BglII;
RescueMu is a 4.9 kb, modified maize Mu transposon designed to allow plasmid rescue from total genomic DNA.
Department of Biological Sciences
Stanford University
Stanford University
SS California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2227
Fax: 650 725 8221
Email: walbot@stanford.edu
Possible ligation site of ends cut by 2 different endonucleases.
Reverse complemented poet-ligation sequence from source sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H23825

yn71e03.s1 Soares adult brain N255H555; Homo sapiens CDNA clone IMAGE:173884 3' similar to SP.539059 S39059 BRG1 PROTEIN - ;contains TAR1 repetitive element ;; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The foase is to 49)

Hillier L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, L., Rohlfing, T., Soaree, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The Mash Underck EST Project
Unpublished (1995)
Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
Insert Size: 1506
High quality sequence starts: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
/cultivar="mixed background W23/A188/B73/K55"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60.5%; Score 22.4; DB 9; Length 43; 43.8%; Pred. No. 1.3e+05; Live 12; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 GGGTCCTCCTCGACCTCCATGCCGTGGAT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAU 32
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 9
BM395132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                               plasmid inserts
Unpublished (2000)
Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Rm. 308, Blomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AZ585629 10kb plasmid UUGCIM library Mus musculus genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        frontal, parietal, temporal and occipital cortex from the left and right hemispheres, subcortical white matter, basal ganglia, thalamus, cerebellum, midbrain, pons and medulla."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 43) 1 (bane, Longare, M., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, M., Longarce, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A. and Wright, D., Weiss, R.
High quality sequence stops: 1
Source: IMAGE Consortium, LINL
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further information.
Trace considered overall poor quality
Possible reversed clone: similarity on wrong strand
Insert Length: 1506 Std Brror: 0.00
Seq primer: Promega -21m13
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60.5%; Score 22.4; DB 7; Length 49; 50.0%; Pred. No. 1.3e+05; ive 11; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                               /dev_stage="55-year old"
/lab_host="DH10B (ampicillin_resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone UUGC1M0390K23 R, genomic survey sequence. AZ585629
                                                                                                                                                                                                       /organism="Homo sapiens"
                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="GDB:3835919"
/db_xref="taxon:9606"
/clone="IMAGE:173884"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GUCCACCUCCUCGCGGUNNNNNN 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26 GTCCACCTCCTTGCGGTGGCGGGA 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AZ585629.1 GI:11707704
                                                                                                                                                                                                                                                                                                 /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best_Local Similarity 50.0%
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
AZ585629
                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
```

```
(http://www.jax.org/resources/documents/dhares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end repaired with T4 DNA polymerase and T4 polymucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoreasis. Vector DNA was prepared from a derivative of pWD42 (gil 4732114 gb) Har129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptore complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45 Dp mRNA linear EST 17-JAN-2002 50072-2-7-F09.r.1 Chilcoat/Turkewitz cDNA (large fraction) Tetrahymena thermophila cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="B. Coli strain XL10-Gold, Tl-resistant, F-" /clone lib="Mouse 10kb plasmid UGGCIM library" /note="Vector: PWD42nv; Purified genomic DNA from M. musculus G57BL/63 (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 45)
Turkewitz, A.P., Karrer, K.M., Jahn, C., Orias, E., Kirk, K.E.,
Frankel, J. and Klobutcher, L.
EST from Terrahymena thermophila, strain CU428.1, growing cells
Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tetrahymena thermophila
Eukaryota, Alveolata, Ciliophora, Oligohymenophorea,
Hymenostomatida, Tetrahymenina, Tetrahymenidae, Tetrahymena.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 58.9%; Score 21.8; DB 8; Length 43; Best Local Similarity 56.0%; Pred. No. 2.1e+05; Matches 14; Conservative 9; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Turkewitz AP
Molecular Genetics and Cell Biology
Wilversity of Chicago
920 E. 58th Street, Chicago, IL 60637, USA
Tel: 773 702 4374
Ems: 773 702 3172
Email: apturkew@midway.uchicago.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laboratory Mouse DNA Resource
                                                                                                Std Error: 0.00
                                                                                            Insert Length: 10000 Std Error: 0 Plate: 0390 row: K column: 23 Seq primer: CACACAGAAACAGCTATGACC Class: plasmid ends
High quality sequence stop: 43.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                    /wol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
/clone="UUGC1M0390K23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 CCACCUCCUCGCGGUNNNNNGGG 29
                                                                 Email: ddunn@genetics.utah.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tetrahymena thermophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM395132.1 GI:18195185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sex="Male"
Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                          .43
```

us-09-699-667e-65.siz.rst

FEATURES

```
German Genetrap Consortium (GGTC)
Email: info@genetrap.de
Rosabetageo gene trap. Sequence tag generated by 5'RACE. Additional
sequence information can be found at:
'http://genetrap.gsf.de/project/web new/database/result_clone.html?
clone_id=W269A01' ES cell line harboring insertion mutation of
target gene is available at:
'http://genetrap.gsf.de/project/web_new/order_clones/howtoorder.htm
'l Inhouse Sequence identifier: 12126
Class: Gene Trap.
                                                                                                                                              Bukaryotta, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 53)
1 Hansen, J., Floss T., van Sloun, P., Fuchtbauer, E.M., Vauti, F., Arnold, H.H., Schnutgen, F., Wurst, W., Von Melchner, H. and Ruiz, P. A large-scale, gene-driven mutagenesis approach for the functional analysis of the mouse genome
Proc. Natl. Acad. Sci. U.S.A. 100 (17), 9918-9922 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryogica, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi; Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

Mol-CaAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Tumor Gene Index.

Unpublished (1997)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-romail.nih.gov

Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.

Emmert-Buck, M.D., Ph.D.

Cond. Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AI612870 ST 16-DEC-1: tx20f12.x1 NCI CGAP Ut4 Homo sapiens cDNA clone IMAGE:2269775 3' similar to TR:Q40503 Q40503 EXTENSIN. [1] ;contains MSR1.tl MSR1 repetitive element ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cell_type="Embryonic stem cell"
/cell_line="ES cells 12982 (formerly 129/SvPas)"
/clone_lib="GGTC Gene Trap Library GV04C04"
/note="Vector: ROSAbetageo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.4%; Score 21.6; DB 9; 47.1%; Pred. No. 2.5e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51 GGCTCGGCCTCGAGGTGTGCGCGGGGCCGGCGT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 58.4%; Score 21.6; U
Best Local Similarity 47.1%; Pred. No. 2.5e
Matches 16; Conservative 11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
1. 53
/organism="Mus musculus"
/mol type="mRNA"
/strain="129 Sv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
/clone="W269A01"
                                                                                                   Mus musculus (house mouse)
Mus musculus
                                             CL214958.1 GI:40731859
W269A01, mRNA sequence.
CL214958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AIĜ12870
AIG12870.1 GI:4622037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                              Contact: GGTC
                                                                                                                                                                                                                                                                                                                                                                                         12904583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST.
                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
AI612870/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                              MEDLINE
PUBMED
                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA878748 49 bp mRNA linear EST 25-MAR-1998 of85b02.81 NCI CGAP Li5 Homo sapiens cDNA clone IMAGE:1437099 3' similar to SW:VNUA PRVKA P33485 PROBABLE NUCLEAR ANTIGEN. ;contains element TAR1 repetItive element ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CL214958 53 Jp mRNA linear GSS 30-JUN-2004 W269A01 GGTC Gene Trap Library GV04C04 Mus musculus cDNA clone
                                                                   /organism="Tetrahymena thermophila"
/mol type="mRNA"
/strain="C4428.1"
/db xref="tean:591"
/clone lib="Chilcoat/Turkewitz cDNA (large fraction)"
/note="Vector: BluesCriptz SK*, becais on library
preparation can be found in Chilcoat and Turkewitz (2001)
Proc. Natl. Acad. Sci USA, 98: 8709-8713."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 49)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="NCI_CGAP_Lis"
/note="Organ: liver; Vector: pCMV-SPORT4; Site_1: SalI;
Site_2: Not1; Cloned unidirectionally. Primer: Oligo dr.
Average insert size 0.8 kb."
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.9%; Score 21.8; DB 1; Length 49; 45.5%; Pred. No. 2.1e+05; ive 12; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                   Length 45;
                                                                                                                                                                                                                                                                                                                                                                                         7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
unknown library type
Trace considered overall poor quality
Seg primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                   58.9%; Score 21.8; DB 4;
51.5%; Pred. No. 2.1e+05;
iive 9; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="texon:9606"
/clone="IMAGE:1437099"
/tissue_type="hepatic adenoma"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13 GGGCCCCCCCCCCCCCCGCTGGAGCTCCAGCTTG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNGGGCAUG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 CCACCUCCUCGCGGUNNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40 CCTCCTCCCGCGGGGTGTTTTGGGATCCCGC 8
                        cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA878748.1 GI:2987713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                   . .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
Seq primer: T3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA878748
                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
```

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

TITLE

JOURNAL

FEATURES

RESULT 10 AA878748/c DEFINITION

Best Loca Matches

ö

Gaps

ö

EST 16-DEC-1999

RESULT 11 CL214958/c LOCUS DEPINITION

Matches

```
1. (Dages 1 to 25)
Chillingworth, C., Cemond, D., Harris, B., El-Sayed, N., Hou, L.,
Chillingworth, C., Ormond, D., Harris, B., El-Sayed, N., Hou, L.,
Melville, S. E., Rajandream, M.A. and Barrell, B.G.
Melville, S. E., Rajandream, M.A. and Barrell, B.G.
Direct Submission Trypanosoma brucei genome sequencing
submitted (10-DEC-2000) Trypanosoma brucei genome Campus, Hinxton,
Cambridge CB10 15A, E-mail: barrell@sanger.ac.uk and
nl@sanger.ac.uk
Constructed at the Institute for Genomic Research (TIGR),
Rockville, MD. Genomic DNA isolated from a cloned population of
Trypanosoma brucei (TREU927/4 GUTAt 10.1) was mechanically sheared
to give a tight size distribution (
4 kb). The v + i method used for the library construction is
described in detail in Smith, H. and venter, J.C. (Making small
insert libraries for whole genome shotgun sequencing projects. In
Genome Sequencing: A Practical Approach, eds. M. Vaudin and B.
Barrell, Oxford University Press, 1999).
/lab host="DH10B"
/clone=11b="Soarse testis_NHT"
/clone=12b="Soarse testis_NHT"
/note=12betor: pryT3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA
was prepared from mRNA obtained from Clontech
Laboratories, Inc., and primed with a Not I - oligo(dT)
primer [5'
                                                                                                                                                                                                                                                         Double-stranded CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Econed into the Not I and Eco RI sites of the modified pi773 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TA234D12P 55 bp DNA linear GSS 13-DEC-2000
T. brucei sheared genomic DNA clone 234d12, forward sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bmail: nelsayed@tigr.org
Details of T. brucei sequencing at the Sanger Centre are available
at http://www.sanger.ac.uk/Projects/T_brucei/.
Location/Qualifiers
                                                                                                                                                                                                                                 IGITACCAAICIGAAGIGGGAGCGGCCGCCAAITITITITITITIT 3'].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Trypanosoma brucei
Eukaryota; Buglenozoa; Kinetoplastida; Trypanosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57.3%; Score 21.2; DB 1; Length 49; 44.1%; Pred. No. 3.5e+05; ive 12; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 21.2; DB 9;
Pred. No. 3.5e+05;
9; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Trypanosoma brucei"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39 TCCAGCCCCCACGGTTGTCCCGGGGGAAACCTT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol type="genomic DNA"
/strain="TREU927"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 CCACCUCCUCGCGGUNNNNNNGGGC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:5691"
/clone="234d12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AL481441.1 GI:11847135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trypanosoma brucei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 55)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 44.1
nes 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            гураповоща.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL481441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TA234D12P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA993587 49 bp mRNA linear EST 27-AUG-1998 ot44g10.81 Soares testis NHT Homo sapiens cDNA clone IMAGE:1619682 3, similar to TR:Q13748 Q13748 ALPHA-TUBULIN. [1] ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONA Library Arrayed by: Greg Lennon, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. CONSOITEUM/LLNL at:
      cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.B. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clome_lib="NCI_CGAP_Ut4"
/note="Organ: uferus; Vector: pCMV-SPORT6; Site_1: Sal1;
Site_2: Not1; Cloned undirectionally. Primer: Oligo dT.
Average insert size 1.48 kb. Life Technologies catalog #:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 49)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP).
                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2269775"
/tissue_type="serous papillary carcinoma, high grade,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumor Gene Index
Unpublished (1997)
Upublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs r@mail.nih.gov
CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.4%; Score 21.6; DB 1; Length 58; 42.9%; Pred. No. 2.5e+05; tive 13; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Trace considered overall poor quality
Insert Length: 1291 Std Error: 0.00
Seg primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ww-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                              Trace considered overall poor quality Insert Length: 869 Std Brror: 0.00 Seq primer: -40UP from Gibco High quality sequence stop: 1 POLYA-NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 UCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:1619682"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA993587.1 GI:3180132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11542-016"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 42.9%
Matches 12, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA993587
```

Query Match

ò 원

ORIGIN

source

FEATURES

KEYWORDS SOURCE ORGANISM

VERSION

REFERENCE AUTHORS

TITLE

JOURNAL

FEATURES

RESULT 13 AA993587/c LOCUS DEFINITION ACCESSION

us-09-699-667e-65.siz.rst

```
CL234247
02S0288-04D1-A12 UniformMu MuTAIL Library Zea mays genomic clone
02S0288-04D1-A12, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:4577"
/clone="0280288-04D1-A12"
/clone="1b="UniformMu MuTALL Library"
/note="Wector: TOOPPCR4; DNA flanking Mu transposon insertions in Mu inactive lines were extracted from the UniformMu maize population by the thermo assymmetric interlaced PCR (TAIL) protocol using primers specific for the Mu terminal inverted repeat and a set of 16 arbitrary primers. Amplicons were size enriched using Sepharose 400 spin columns and cloned into the TOPO PCR4 vector."
                                                                                                                                                                                                                                                                                                                                       Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.

1 (bases 1 to 57)
Latshaw, S., Tan, B-.C., Settles, A.M. and McCarty, D.R.
Sequence tagged transposon insertions from the UniformMu maize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contract: Donald R. McCarty
Plant Molecular and Cellular Biology Program
University of Florida
University of Florida
University of Plantia
University of Statementile, FL 32611-0690, USA
Tel: 352-32-1928 x322
Email: drm@ufl.edu
Sequence flanking probable Mu insertion site in UniformMu line:
Class: transposon insertion site.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Zea mays"
/mol_type="genomic DNA"
/strain="W22 (ACR, bz1-m9)"
/cultivar="UniformMu"
13 CCACATCTGCGCGGTTAGCGACGGGC 38
                                                                                                                                                                                                                                    CL234247.1 GI:40778227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            population
Unpublished (2003)
                                                                                                                                                                                                                                                                                             Zea mays
Zea mays
                                                                                                                                                                                                                CL234247
                                                                          RESULT 15
CL234247
LOCUS
DEFINITION
                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
COMMENT
                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
셤
```

ö 57.3%; Score 21.2; DB 9; Length 57; 46.9%; Pred. No. 3.6e+05; tive 11; Mismatches 6; Indels 11 CCAGCAGCTTGCGGAGTGGACTGCGCATGCGC 42 5 CCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36 15; Conservative Query Match Best Local Similarity Matches 15; Conserva ઠે

ö

Gaps

셤

Search completed: March 15, 2005, 20:38:17 Job time : 1490.44 secs

The State of the S

Perfect score:

Sequence:

OM nucleic -

Run on:

Scoring table:

Searched:

Minimum DB Maximum DB

Database

```
AX741210 Sequence
AX7319980 Hepatitis
AX021007 Sequence
AR043422 Sequence
AR043422 Sequence
AR043422 Sequence
AR062377 Sequence
AR18336 Sequence
AR18336 Sequence
AR18381 Sequence
AR18385 Sequence
CQ759677 Sequence
CQ759677 Sequence
I41388 Sequence
I41388 Sequence
I41388 Sequence
I41388 Sequence
I41388 Sequence
I4138 Sequence
I41386 Sequence
I41386 Sequence
I43386 Sequence
I43386 Sequence
AR142597 Sequence
AR342596 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 9958856-A 53 04-00V-1999;

PANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers

1. 37

/ organism="synthetic construct"
//mol_type="unassigned RNA"
//db xref="taxon:32630"
//note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95.7%; Score 35.4; DB 6; Length 37; 59.5%; Pred. No. 26; ive 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012282 57 bp
Sequence 44 from Patent WO9955856.
AX012282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37 bp
Sequence 53 from Patent WO9955856.
    AX741210
HED309880
AR021007
                                                                                                                                       AR062377
AR183796
AR183836
AR368179
                                                                                                                                                                                                                                                              141388
AR123021
141385
141386
141378
BD226817
                                                                                                                                                                                                                                                                                                                                                                                   AR243300
AR342596
AR342597
AX174838
AX174839
                                                                                                                                                                                                                        AR368219
CQ759677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012291
AX012291.1 GI:9998352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 59.5%
Matches 22; Conservative
      RESULT 1
AX012291
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
AX012282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX012282 Sequence
AX012283 Sequence
AX012284 Sequence
AX012285 Sequence
AX012286 Sequence
AX012289 Sequence
AX012289 Sequence
AX012290 Sequence
AX01229 Sequence
AX012
                                                                                                                                       March 15, 2005, 06:19:02 ; Search time 726.693 Seconds (without alignments) 2467.126 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012291 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                          9416466
                                                                                                                                                                                                                                                                1 ggguccaccuccucgcggunnnnnngggcaugcaby 37
                         GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                4708233 segs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HPDJS1
HPDJS2
HED309874
HED309875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                    nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012291
AX012283
AX012283
AX012284
AX012286
AX012286
AX012280
AX012289
AX012289
AX012289
                                                                                                                                                                                                                                                                                                                          Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                        US-09-699-667E-65
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                        IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb_Bt8: *
gb_sy: *
gb_un: *
gb_vi: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gb htg: *
gb htg: *
gb in: *
gb ov: *
gb pat: *
gb pr: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
577
577
577
577
577
866
                                           Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenEmbl: *
```

PAT 06-SEP-2000

ö

Gaps

ö

PAT 06-SEP-2000

RNA

AX012282.1 GI:9998343

DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

AB037948 AB037949 HPDAGE HDVJS3 AB037947

1674 1677 1683

000000000

Score

Result

synthetic construct synthetic construct

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 955856-A 48 04-NOV-1999;
ANANVORANICH SIRINET (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CA); PERREAULT JEAN
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                               95.7%; Score 35.4; DB 6; Length 57; 59.5%; Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57;
                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P. Nucleic acid enzyme for rna cleavage Patent: WO 9955856-A 47 O4.NOV-1999; ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA PIERRE (CA); UNIV SHERROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 95.7%; Score 35.4; DB 6; Length Best Local Similarity 59.5%; Pred. No. 23; Matches 22; Conservative 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGTCCACCTCCTCGCGGTCCGCCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                             1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCCTT 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                        1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                 1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_txref="taxon:32630"
/noce="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .57
/organism="synthetic construct"
/mol type="unassigned RNA"
/bb xref="texon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    other sequences; artificial sequences
                                                                                                                                                                                   15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 48 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                              Sequence 47 from Patent W09955856.
cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                         AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                     22; Conservative
                                                                                                                                                                    Similarity
                                                                                                                                                   Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                        source
                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                 RESULT 5
AX012285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
AX012286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                            음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Batent: W0 955586-A 46 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: W0 995886-A 45 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Parent: Wo 995586-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 95.7%; Score 35.4; DB 6; Length 57; Best Local Similarity 59.5%; Pred. No. 23; Matches 22; Conservative 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                               Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                      GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                           1 GGGTCCACCTCCTCGCGGTCCGACCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGTCCACCTCCTCGCGGTCCCAGCTGGGGC 37
                                                                                                                                                                                                                                                                                 9
                                                                                                                                                 1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences.
     other sequences; artificial sequences
                                                                                                                                                                                                                                                                               Query Match
95.7%; Score 35.4; Di
Best Local Similarity 59.5%; Pred. No. 23;
Matches 22; Conservative 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX012284 57 bp
Sequence 46 from Patent WO9955856.
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012283 57 bp Sequence 45 from Patent WO9955856.
                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
AX012284
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                      REFERENCE
                                        AUTHORS
                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                               ORIGIN
```

SOURCE

g

셤

```
ö
                                                                                 PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 9958365-A 52 04-NVV-1999;
ANANVORANICH SIRIMART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
1. 57

/organism="synthetic construct"
//mol_type="unassigned RNA"
//db xref="taxon:32630"
//note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VRL 18-DEC-2002
                                                                                                                                                                                                                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 51 04-007-1999;
ANANVORANICH SIRINES AND LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95.7%; Score 35.4; DB 6; Length 57; ilarity 59.5%; Pred. No. 23; Conservative 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Length 57;
                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HPDJS1 866 bp RNA line
Hepatitis D virus isolate:7/18/83 genomic RNA.
1 GGGTCCACCTCCTCGCGGTCCGAACTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGUCCACCUCCUCGCGGUNNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGTCCACCTCCTCGCGGTCCGAGCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGTCCACCTCCTCGCGGTCCGATCTGGGCGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                           /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/nofe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΩB
                                                                                                                                                                                                    other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95.7%; Score 35.4; E
59.5%; Pred. No. 23;
ive 15; Mismatches
                                                                              Sequence 51 from Patent W09955856. AX012289 GI:9998350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012290 57 bp
Sequence 52 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AXÖ12290
AXO12290.1 GI:9998351
                                                                                                                                                                         synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                         synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 59.5%
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
                                                                                                   DEFINITION
                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
HPDJS1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                RESULT 9
AX012289
LOCUS
                                                                                                                                                   KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                       PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                           Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Parent: Wo 995586-A 49 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Batent: WO 995586-A 50 04-NOV-1999;

ANANVORANICH SIRINART (CB); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHEREROOKE (CA)

Location/Qualifiers
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95.7%; Score 35.4; DB 6; Length 57; 59.5%; Pred. No. 23; tive 15; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                     1 GGGTCCACCTCCTCGCGGTCCGGCCTGGGCATGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGTCCACCTCCTCGCGGTCCGTCCTGGGCATGCGGC 37
                                                                                 1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
9
                 DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="texon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.57
/organism="synthetic construct"
/mol type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 95.7%; Score 35.4; DB 1 Similarity 59.5%; Pred. No. 23; 22; Conservative 15; Mismatches
                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences.
                 i; Score 35.4; D
i; Pred. No. 23;
15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012288 57 bp
Sequence 50 from Patent W09955856.
AX012288 GI:9998349
                                                                                                                                                                                                     Sequence 49 from Patent WO9955856.
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                           AX012287.1 GI:9998348
                 95.7%;
59.5%;
                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                   22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 22; Conserva
                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 22; Conserv
                 Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                   Matches
                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
AX012288
LOCUS
                                                                                                                                                                                     AX012287
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                         RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

ઠે 셤

```
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'codon_start=2
81-472-22-7853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene="ag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene="ag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 911)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . .911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21488523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11602783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deny, P
Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HED309874/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                        CDS
              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tränslation="MSQSETRRGRRGTREETLEKWITARKKAEELEKDLRKTRKTIKK
LEEBNPWLGNIVGIIRKKRODEGAPPAKRPRIDOMEVDSGPGKRPHKSGFTDKEREDH
RRRKALENKKKQLSAGGKILSKEEEEBLRRLTDEDEERKRRVAGPRVGDVNPSRGGPR
GAPGGGFVQQMAGVPSEPFSRTGEGLDTRGTQFP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VRL 18-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             These data kindly submitted in computer readable form by: Fumio
                                                                                                                                                                                      These data kindly submitted in computer readable form by: Fumio
                                   Hepatitis delta virus
Hepatitis delta virus
Viruses; Deltavirus.
1 (bases 1 to 866)
Imazeki,F., Omata,M. and Ohto,M.
Heterogeneity and evolution rates of delta virus RNA sequences
J. Virol. 64 (11), 5594-5599 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepatitis delta virus
Hepatitis delta virus
Viruses; Deltavirus.
1 (Dases; Los 866)
Imazeki,F., Omata,M. and Ohto,M.
Heterogeneity and evolution rates of delta virus RNA sequences
J. Virol. 64 (11), 5594-5599 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 81.6%; Score 30.2; DB 14; Length 866; Best Local Similarity 54.5%; Pred. No. 7.1e+02; Matches 18; Conservative 14; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                     /isolation source="patient S"
/db_xref="taxon:12475"
/note="synonym: Hepatitis delta virus"
complement(239. .826)
/note="unnamed protein product; ORF"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          866 bp RNA li
Hepatitis D virus isolate:8/6/87 genomic RNA.
D90193.1 GI:221697
                                                                                                                                                                                                                                                                                                                                                            organism="Hepatitis delta virus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 First Department of Medicine
Chiba University School of Medicine
1-8-1 Inohana
Chiba 280
                                                                                                                                                                                                                First Department of Medicine
Chiba University School of Medicine
1-8-1 Inohana
Chiba 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /proteIn_id="BAA14216.1"
/db_xref="G1:221696"
                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic RNA"
/isolate="7/18/83"
                                                                                                                                                                                                                                                                                                               81-472-22-7853.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                   81-472-22-7171 x2162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Phone: 81-472-22-7171 x2162
              D90192.1 GI:221695
                                                                                                                                                                                                                                                                                                                                            .866
D90192 M58303
                                                                                                                                                                                                     Imazeki
                                                                                                                                                                                                                                                                                   Japan
Phone:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Imazeki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2214027
                                                                                                                                                                       221402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Japan
                                                                                                                                                                                                                                                                                                                  Fax:
                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                            ORGANISM
                                                                                                        AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
HPDJS2/c
ACCESSION
                                                                                         BFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                             KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
/codon start=1
/ptotein id="BAA14217.1"
/db xref="GI:221698"
/translation="MSQSETRRGRRGTREFILEKWITARKKAEELEKDLRKARKTIKK
/translation="MSQSETRRGRRGTREFILEKWITARKKAEELEKDLRKARKTIKK
REBRIPWLAGNILGIIRKGKOBGAPPRRPPTDQMEVDSGPGKRPHKSGFTDKEREDH
RERKALENKKKQLSAGGKILSKEEEEELRRLTDEDEERKRRVAGPRVGDVNPSRGGPR
GAPGGGFVPQMAGVPESPFSRTGEGLDIRGTQGFP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VRL 23-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ivaniushina, V., Radjef, N., Alexeeva, M., Gault, E., Semenov, S., Salhi, M., Kiselev, O. and Deny, P.
Hepatitis delta virus genotypes I and II cocirculate in an endemic area of Yakutia, Russia J.
J. Gen. Virol. 82 (Pt 11), 2709-2718 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (23-FBB-2001) Deny P., Bacteriologie, Virologie -
Hygiene, Assistance Publique-Hopitaux de Paris - Universite Paris
13, 125 rue de Stalingrad, 93009, BOBIGNY Cedex, 93009, FRANCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hepatitis D Virus partial ag gene for hepatitis delta small antigen, genomic RNA, isolate Yakut-245.
AJ309894.1 GI:15211919
ag gene; hepatitis delta small antigen.
Hepatitis delta virus
Hepatitis delta virus
VRL 23-c.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 866;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="hepatitis delta small antigen"
/protein_id="CA051301.1"
/db_xref="G15211920"
/db_xref="G0A:Q912E4"
                                                                                                                                    /nore="synonym: Hepatitis delta virus"
complement(239. .826)
                                                                                                                                                                                                 'note="unnamed protein product; ORF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
81.6%; Score 30.2; DB 14;
Best Local Similarity 54.5%; Pred. No. 7.1e+02;
Matches 18; Conservative 14; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Hepatitis delta virus"
/virion
'organism="Hepatitis delta virus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   function="viral RNA replication"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115 TCCACCTCCTCGCGGTCCGACCTGGGCATCCGT 83
                                                                                   ູ້ລ
                                                                                   /isolation_source="patient/db_xref="taxon:12475"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol type="genomic RNA"
/isolate="Yakut-245"
/db_xref="taxon:12475"
/country="Russia:Yakutia"
                               /mol_type="genomic RNA"
/isolate="8/6/87"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (680. .>911)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Genotype II"
complement(680..911)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
```

ö

Gaps

ö

Indels

1,

36

us-09-699-667e-65.std.rge

```
Hepatitis D virus genomic RNA, complete genome, isolate:VnzD8375.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /trānslation="MSQPDARPGSKAREEALEQWVEERKKKRIAEKELRINKKIKKL
BEDRIWALGNIVGMLRKKKDEGGPPRAKBRREDMEIDSTPGRKEKARGFTDQERRDHR
RRKALENKKKQLAGGKNILSREEEEELRALAEDDDERERRVAGPRPGGVNPMDGPPRG
APGGGFVPSLQGVPESPFSKTGEGIDIRGTQQFP"
                                                                                                                                                                                                                                                                                                                                                           Nakano,T., Shapiro,C.N., Hadler,S.C., Casey,J.L., Mizokami,M., Orito,E. and Robertson,B.H. Characterization of hepatitis D virus genotype III among Yucpa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (03-FEB-2000) Tatsunori Nakano, Centers for Disease Control and Prevention, Hepatitis Branch; 1600 Clifton Rd. NE, Atlanta, Georgia 3033; USA (E-mail:tcni@cdc.gov, Tel:1-404-639-2335, Fax:1-404-639-1563)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/product="small hepatitis D antigen"
/protein_id="BAB68379.1"
/db_xrefe="G1:15718377"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indians in Venezuela
J. Gen. Virol. 82 (Pt 9), 2183-2189 (2001)
21405821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
81.6%; Score 30.2; DB 14;
Best Local Similarity 54.5%; Pred. No. 6.2e+02;
Matches 18; Conservative 14; Mismatches 1;
                                                                SSE TCCACCTCCTCGCGGTCCGACCTGGGCATCCGT 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB
    14; Mismatches
                                                                                                                                                                                                                                       AB037947.1 GI:15718376
HDAg; small hepatitis D antigen.
Hepatitis delta virus
Hepatitis delta virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (1007. .1591)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search completed: March 15, 2005, 12:35:07 Job time : 727.693 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 1672)
Nakano,T.
Direct Submission
                                                                                                                                                                                                                                                                                                                     Viruses; Deltavirus.
    18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11514728
                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                          RESULT 15
AB037947/c
                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                      ACCESSION
VERSION
    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
/db xref="UniProt/TrEMBL:Q912B4"
/translation="KSLSREEEEERRLTEEDERRERRVAGPRVGDVNPPMGSPRGAP
GAGFVPQMTGVPESPFTRTGEVLDIRGTQGFP"
                                                                                                                                                                                                                                                                                                                                                                                                      VRL 23-JAN-2002
                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="GOA:Q912E3"
/db_xref="UniProt/TrEMBL:Q912E3"
/translation="NQLSAGGKSLSREEEEELRRLTEEDERRERRVAGPRVGDVNPPG
GSPRGAPGGGFVPQMTGVPESPPTRTGEGLDIRGTQGFPWVNPAPPGGRLPLLECTPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ivaniushina, V., Radjef, N., Alexeeva, M., Gault, B., Semenov, S., Salhi, M., Kiselev, O. and Deny, P. Hepattis delta virus genotypes I and II cocirculate in an endemic area of Yakutia, Russia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
Submitted (23-FEB-2001) Deny P., Bacteriologie, Virologie -
Hygiene, Assistance Publique-Hopitaux de Paris - Universite Paris
13, 125 rue de Stalingrad, 93009, BOBIGNY Cedex, 93009, FRANCE
Location/Qualifiers
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                  HED309875 934 bp RNA linear VRL 23-JAN
Hepatitis D Virus partial ag gene for hepatitis delta antigen,
genomic RNA, isolate Yakut-63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        function="viral RNA replication and packaging"
                                                                                                                                                                                                                        ö
                                                                                                                                                                                 Length 911;
                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=3
/product="hepatitis delta antigen"
/protein_id="CAC51302.1"
/db_xreff="GI:15211922"
                                                                                                                                                                             Query Match 81.6%; Score 30.2; DB 14;
Best Local Similarity 54.5%; Pred. No. 7.1e+02;
Matches 18; Conservative 14; Mismatches 1;

    .934
/organism="Hepatitis delta virus"

                                                                                                                                                                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /country="Russia:Yakutia"
/note="Genotype II"
complement(624..934)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AJ309875
AJ309875.1 GI:15211921
ag gene, hepatitis delta antigen.
Hepatitis delta virus
Hepatitis delta virus
Viruses; Deltavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="genomic_RNA"
/isolate="Yakut-63"
/db_xref="taxon:12475"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (624. .>934)
                                                                              /gene="ag"
/note="large HGAg"
/replace="c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="ag"
/replace="t"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 934)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /virion
                                                             681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11602783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Deny, P.
                                                           variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                           RESULT 14
HED309875/c
                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                              ઠે
```

ö

Gaps

ö

Indele

81.6%; Score 30.2; DB 14; Length 934; 54.5%; Pred. No. 7e+02;

Query Match Best Local Similarity

Length 1672;

free the second second

,

```
ALIGNMENTS
              AAL38850

ABK46316

ABK46316

ABK46316

ADI30383

ADI30423

ADI3982

ADO13982

ADO13982

ADO13982

AAC53138

AAC53138

AAC53138

AAC53138

AAC665

AAC665

AAC665

AAC665

AAC665

AAC665

AAC6665

AAC665

AA
                                    522
522
522
522
522
522
524
680
884
884
885
990
990
990
990
990
990
990
990
990
March 15, 2005, 01:00:51; Search time 204.798 Seconds (without alignments) 1069.494 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                          8780412
                                                                                                                                                                                                                                                     1 ggguccaccuccucgcggunnnnnnngggcaugcsby 37
                  GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                  4390206 seqs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                         IDENTITY NUCDX Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N. Geneseq 16Deco4:*

1: geneseqn1980s:*

3: geneseqn2000s:*

4: geneseqn2001as:*

5: geneseqn2001as:*

6: geneseqn2001as:*

7: geneseqn2002as:*

9: geneseqn2003as:*

9: geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                          US-09-699-667E-65
37
                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                           Scoring table:
```

Sequence:

. . .

Run

Searched:

Database

Aa292803 Hepatitis
Aa138810 Alphaviru
Abk46276 HDV antig
Abk46316 Hepatitis
Adi3038 Hepatitis
Adi3038 Hepatitis
Adi3038 Dukaryoti
Ado13982 Eukaryoti
Adr47033 Dengue vi
Adr47033 Dengue vi
Adr47033 Dengue vi
Adr47033 Dengue vi
Adr47035 EPO gene
Ax76566 Hepatitis
Adf84036 EPO gene
Ax76586 Hepatitis
Adp96249 HEP rabie
Abz82121 Hepatitis
Adp96249 HEP rabie
Adx82174 Clone del
Adh10576 Nucleotid
Ann82172 CDNA corr

RESULT 1	ID AAZ57639 standard; RNA; 37 BP. XX	AC AAZ57639;		DI 05-AFK-2000 (Ilrsc entry) XX	DE Nucleotide sequence of bimolecular ribozyme RzA fragment.		KW Bimolecular ribozyme; viral KNA cleavage; KZA iragment; KW inherited disease; ss.		OS Synthetic.		misc_binding 16	FT /*tag= a /bound moiety= "RzB fraqment of bimolecular ribozyme"		FT sequence AAZ57640"		 misc_binding 2025		F: // / / / / / / / / / / / / / / / / /		FI misc binding 30. 37	\ 1			FT sequence AAZ5/640"	AA MACAGEEGEC A		PD 04-NOV-1999.		PF 29-APR-1999; 99WO-CA000391.		PR 29-APR-1998; 98CA-02230203.		FA (UISH ) UNIV SHEKBKUUKE.
	* · · · · · · · · · · · · · · · · · · ·	11bs:*	)2ag:*	)3aB;*	33bB:*	303GB:*	003ds:*	0.04bs:*	and in the country of constituted by the property of the contract of the contr	From No. 15 the limiter of results produced by inside to instead as a secore greater than or equal to the score of the result being printed,		SUMMARIES			3 ID Description	AAZ57639 Aaz57639	AAZ57636 Aaz57636	AA257638 Aa257638	AA25/63/ AB277701 Ab27770	ADR47040 Adr470	ADT48965	AAQ86173 A	AAQ86204	AAT31151 Aat31151	AAT3U81/ AAC3U81	PCC2FANG FCC2FANG FCC2FANG FCC2FANG	AAV60154 Aav60154	AAV60185 Aav60185	AAV70746 Aav70746	AAV70714 Aav70714	AAZ92930 Aaz92930	AAZ92970 Aaz92970	AAZYZ843 AAZYZ843 Hepariris
1: geneseq 10000.14:		5: geneseqn2001bs:*			וסו		11: geneseqn2003ds:* 12: genesegn2004as:*		to softmine off the own	score greater than or equa	and is derived by analysis		dio	lt Query	<ol> <li>Score Match Length DB</li> </ol>	95.7	95.7 57	3 35.4 95.7 57 3	1688	30 81.1 48	30 81.1 48	30 81.1 51	30 81.1 52	30 81.1 52	30 BL.1 52	10 04	13 30 81:1 32 2 14 30 81:1 52 2	30 81.1 52	30 81.1 52	30 81.1 52	30 81.1 52	30 81.1 52	30 81.1

Result No.

(UYSH ) UNIV SHERBROOKE

```
This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *tag= a
note= "Porms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                        New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-acting antigenomic delta ribozyme nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95.7%; Score 35.4; DB 3; Length 57; 73.0%; Pred. No. 0.42; ive 10; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGUCCACCUCCUCGCGGUCCGACCUGGGCAUGCGGC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNGGGCCAUGCSBY 37
                                  ä
                                    Lafontaine
                                                                                                                             diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                  Example 1; Fig 1A; 52pp; English
                                  Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ57638 standard; RNA; 57 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 73.0
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52. .57
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
                                                                    WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepatitis D virus.
                                    Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                               This is the nucleotide sequence bimolecular ribozyme RzA fragment. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to anuclaic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3.-UNNXNN-5. The substrate of the enzyme has the sequence 5'-H'*GNNHNN-3'. The binding portion of the sequence 5'-H'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sucleotide sequence at a specific cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l. .6
h. . .6
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                         construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antigenomic delta ribozyme; viral RNA cleavage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 37 BP; 3 A; 16 C; 12 G; 0 T; 6 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 35.4; DB Pred. No. 0.39;
                   Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10; Mismatches
                                                                                                            diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inherited disease; deltaRzP1.1; ss
                                                                                                                                                Example 5; Fig 4; 52pp; English
                   Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95.7%;
73.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ57636 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 73.0°
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= (
52. .57
/*tag= (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20. .25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30. 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7. .19
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /bound
                                                     WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
misc_binding
                   Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-acting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57636;
```

RESULT 2

ð 셤 ö

Gaps

```
This is the nucleotide sequence of ribozyme deltaRzPl.2. This ribozyme cleaves substrate SPl.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzPl.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The cubstrate of the enzyme has the sequence 5'-H*GNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleave sibstrate (cleavage site of the substrate (cleavage site of the substrate cannelectide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other therapeutic, biotechnological and diagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HDV; HDV dFr45; HDV dPr47; HDV dFr73; HDV dFr910; HDV dFr48; HDV dFr644; satellite virus; HBV; SHD; LHD; antigenomic RNA; viral replication;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated nucleic acid from hepatitis D virus, useful for detection,
                                                                                                                                                                                                               New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleotide sequence of the complete genome of HDV variant Pt62.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 95.7%; Score 35.4; DB 3; Length 57; Best Local Similarity 73.0%; Pred. No. 0.42; Matches 27; Conservative 10; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seguence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          deltaRzP1.1 sequence (AAZ57636) shown in figure 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGUCCACCUCCCCGGGUCCCAGCUGGGCAUGCGGC 37
                                                                                                                                  Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ASSI-) ASSISTANCE PUBLIQUE HOPITAUX PARIS
                                                                                                                                                                                                                                                                                      Example 1; Page; 52pp; English.
                                                                                                                             Perreault J, Ananvoranich S,
99WO-CA000391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABZ77701/c
ID ABZ77701 standard; DNA; 1688
                                           98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-SEP-2001; 2001FR-00012285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-SEP-2001; 2001FR-00012285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               viral particle assembly; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Huc AP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-JUN-2003 (first entry)
                                                                                    (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                      WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deny P, Radjef N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-365382/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hepatitis D virus
29-APR-1999;
                                           29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FR2830019-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-MAR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABZ77701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                             This is the nucleotide sequence of a trans-acting antigenomic delta Tibozyme of the invention. This ribozyme cleaves substrate SP1.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaRZP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= d
52.57
/*tag= /rorms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
/note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _moiety= "SP1.2 substrate bases (AAZ57634) 6-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   enzymes also have other therapeut\bar{i}c, biotechnological and diagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                        New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95.7%; Score 35.4; DB 3; Length 57; 73.0%; Pred. No. 0.42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCUCCGGGGGCAUGCCUU 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37
                                                                                      Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                          Example 1; Fig 2; 52pp; English
                                                                                    Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ57637 standard; RNA; 57 BP
98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 73.0
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20. .25
/*tag= c
/bound_mc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                         (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *tag=
                                                                                                                               WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
misc_binding
                                                                                      Perreault J,
29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57637;
```

RESULT 4 AAZ57637

ઠે 셤 ö

Gaps

```
The present sequence represents the complete genome of a hepatitis D virus (HDV) variant. The specification describes the genomes of HDV variants dFr45, dFr47, dFr73, dFr910, dFr48, and dFr64. HDV is a satellite virus of HBV. HDV replicates independently of HBV, and the only two HDV proteins retrieved (sHD and LHD) code for antigenomic RNA. SHD and LHD represent the short (24 kDa) and long (27 kDa) forms, respectively, of the HDV protein. During replication, the functions of these forms of the protein oppose each other: sHD plays an active role in viral replication, while LHD stops it and plays a role in viral particle assembly. Polynucleotides and plypes a role in viral particle detection and genotyping of hepatitis D virus, e.g. for diagnosis and
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors like cervical cancer and viral diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88; cytostatic; virucide; dengue virus; recombinant replicon; deletion; preM protein; C protein; NS1 protein signal; vaccine; cervical cancer; viral disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                                           Gaps
diagnosis and phenotyping, also derived translation products and new
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                         Length 1688;
                                                                                                                                                                                                                                                                                                        Sequence 1688 BP; 350 A; 505 C; 477 G; 356 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TENG-) TENGEN BIOMEDICAL CO.
(BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                         DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                              893 TCCACCTCCTCGCGGTCCGACCTGGGCATCCGT 861
                                                                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCSB 36
                                                                                                                                                                                                                                                                                                                                      81.6%; Score 30.2; E
54.5%; Pred. No. 50;
:ive 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue virus vaccine oligonucleotide #15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 4; SEQ ID NO 37; 38pp; Chinese.
                                                 Disclosure; Page 89; 91pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JAN-2004; 2004WO-CN000088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JAN-2003; 2003CN-00115272
30-JAN-2003; 2003CN-00115273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADR47040 standard; DNA; 48
                                                                                                                                                                                                                                                                          epidemiological monitoring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-NOV-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                       Local Similarity 54.5
nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-625870/60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004072274-A1
              viral variants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-AUG-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADR47040;
                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pang X;
                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ##X8X00000000000000X8
                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

A dengue virus recombinant replicon has a deletion of the complete coding sequence for preM protein of dengue virus and also includes elements of e.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of

```
ö
NSI protein signal; coding regions of all non-structural proteins. The obtained vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can efficiently express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a gene-expressing system using of the full-length dengue virus cDNA clone (PRS/FLD2). The recombinant virus vectors were transfected into baby hamster kidney (BHK) cells to enable the screening of BHK-21 Tet-off cell lines. This sequence corresponds to an oligonucleotide used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a recombinant Japanese encephalitis B virus constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its self-replication function. The virus is useful in producing the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuaced encephalitis B virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Virucide; Japanese encephalitis B virus; bivalent vaccine; hepatitis B;
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                         81.1%; Score 30; DB 13; Length 48; 56.2%; Pred. No. 32;
                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                    Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
(TENG-) TENGEN BIOMEDICAL CO.
(BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17 TCCACCTCCTCGCGTCCGACCTGGGCATCCG 48
                                                                                                                                                                                                                                                                                                                                                                                                   13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 8; SEQ ID NO 29; 33pp; Chinese.
                                                                                                                                                                                                                                                                            recombinant replicon of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR primer 5' HDVr, seq id 29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAR-2003; 2003CN-00115912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADT48965 standard; DNA; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 56.2
les 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-699719/68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCR; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004082712-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-SEP-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADT48965;
                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pang X;
                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADT48965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32

셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequences given in AAQ86167-81 are primers which were used in the generation of plasmid DNA which initiates Sindbis infection. The mappified DNA sequences were used in the construction of a cutaryotic layered vector initiation system (ELVIS) derived from Sindbis. ELVIS's comprise a 5' sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevents transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic fibrosis. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New alpha virus vectors for gene therapy - of viral infection, cancer
                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polo JM;
                                                                                                                                                                                                                                                                                                                                                                   Primer HDV17-68 amplifies vector DNA to initiate Sindbis infection.
                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jolly DJ, Driver DA,
                                                               DB 13; Length 48; 32;
                                                                                                1; Indels
                             Sequence 48 BP; 5 A; 19 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 51 BP; 9 A; 20 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                 17 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 48
                                                                                                                              4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                             81.1%; Score 30; DB 56.2%; Pred. No. 32; ive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  auto:immune disease, etc., and as vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chang SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 2; Page 68; 260pp; English
                                                                                                                                                                                                                                                     В.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93US-00122791
94US-00198450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 56.20,
Best Local B; Conservative
example from the invention.
                                                                                                                                                                                                                                                   AAQ86173 standard; DNA; 51
                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                             Local Similarity 56.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dubensky TW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                    25-MAR-2003
                                                                                                                                                                                                                                                                                                                                  21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                   AAQ86173;
                                                               Query Match
                                                                                                Matches
                                                                                                                                                                                                                                 RESULT 8
                                                                                                                                 ઠે
                                                                                                                                                               셤
```

```
The sequences given in AAQ86200-15 are primers which were used in the production of alphavirus vectors expressing multiple heterologous genes. These vectors are eukaryotic layered vector initiation systems (ELVIS) derived from Sindbis. ELVIS accomprise a.5 sequence capable of initiating transcription of an alphavirus, a nucleotide sequence encoding alphavirus non-structural proteins, a viral junction region which has been inactivated such that viral transcription of the subgenomic fragment is prevented, and an alphavirus RNA polymerase recognition sequence. Inactivation of the viral junction region prevente transcription of the subgenomic fragment making vectors such as this suitable for a wide variety of applications, eg. gene therapy for the treatment of cystic
                                                                                                                                                                             Eukaryotic layered vector initiation system; Sindbis; alphavirus; PCR; transcription initiation; non-structural protein; subgenomic fragment; RNA polymerase recognition sequence; ELVIS; gene therapy; amplify; primer; polymerase chain reaction; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New alpha virus vectors for gene therapy - of viral infection, cancer, auto:immune disease, etc., and as vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Driver DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33; 1; Indels iive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   applications, eg. gene therapy for the treat: (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                 Sindbis/HDV ribozyme sequence reverse primer, HDV17-68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chang SM, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 7; Page 114; 260pp; English.
                                                                                                                                                                                                                                                                                                                                                                       94WO-US010469
                                                                                                                                                                                                                                                                                                                                                                                                        93US-00122791.
                                                                                                                                                                                                                                                                                                                                                                                                                          94US-00198450
                             AAQ86204 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAT31151 standard; DNA; 52
                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dubensky TW, Ibanez CE,
                                                                                                (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (VIAG-) VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1995-131362/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                    WO9507994-A2
                                                                                                                                                                                                                                                                                                                                                                       15-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                      15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                          18-FEB-1994;
                                                                                              25-MAR-2003
                                                                                                                 23-NOV-1995
                                                                                                                                                                                                                                                                                                                                      23-MAR-1995.
                                                                                                                                                                                                                                                                   Synthetic.
                                                                AAQ86204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAT31151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                   AAQ86204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAT3115:
RESULT
                                                               SAXAZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
```

ö

ö

Gaps

ö

81.1%; Score 30; DB 2; Length 51; 56.2%; Pred. No. 33; 1; Indels iive 13; Mismatches 1; Indels

UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35

Driver DA;

Jolly DJ,

```
primer SHDVIF (AAT30816) contains a buffer sequence allowing enzyme digestion, a Sacī site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDVI7-68 (AAT30817) and reverse primer SHDV84R (AAT30818) to generate an HDV ribozyme. This antigenomic ribozyme can be placed between the polyk tract at the 3' end of a Sindbis virus-based eukaryotic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA alpha:virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                       New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33; 1; Indels tive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dubensky TW,
                                                                                                                                                                 Chang SMW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nested PCR primer HDV17-68 of the invention
                                                                                                                                                                                                                                                                                                               Example 3; Page 85; 256pp; English.
                                                                                                                                                                 Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                 95WO-US015490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-00741881.
                                                   94US-00348472
                                                                     95US-00376184.
                                                                                                                          CHIR ) CHIRON VIAGENE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV42394 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                 Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORP.
                                                                                                                                                                                                                     WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-446089/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CHIR ) CHIRON
                                                                                                                                                                 Dubensky TW,
                 30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-0CT-1996;
                                                   30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .8-FEB-1994;
                                                                       18-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US5789245-A.
                                                                                      15-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV42394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42394
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    primer HDV17-68 (AAT31151) is based on hepatitis delta virus (HDV) nucleotides 839-887. It was used with reverse primer HDV49-XC (AAT30850) for the PCR amplification of HDV sequences. A second primer pair, SIN-HDV (AAT31152) and SIN276-SPE (AAT31153), is used to amplify a fragment contg. Sindbis 5'-end sequences fused to HDV sequences. Overlapping Synthesis is used in a second round of PCR using primers HDV49-XC and SIN276-SPE. The resulting construct contains the expression cassette elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction elements HDV ribozyme/Sindbis 5'-end 299 nts/Sindbis junction region/, designated pd5'26s. This was inserted into pcDNA3. Packaging cell line cassettes were constructed that allow inducible expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                                                                                                                                                                         Driver DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                  Alphavirus; Sindbis virus; vector; gene therapy; vaccine; polymerase chain reaction; PCR; primer; hepatitis delta virus; HDV; ribozyme; 89.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer; polymerase chain reaction; PCR; ELVIS; ribozyme; HDV; hepatitis delta virus; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                         Chang SMW, Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 structural proteins via alphavirus vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 7; Page 120; 256pp; English
                                                                                                                                                                                                                                                                                                                                                                         Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮵
                                                                                                                                                                                                                                                         94US-00348472.
95US-00376184.
95US-00405827.
                                                                                                                                                                                                                         95WO-US015490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HDV ribozyme primer HDV17-68
reverse primer HDV17-68
                                                                                                                                                                                                                                                                                                                                (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT30817 standard; DNA; 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 56.2
les 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                       Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                            18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                       Dubensky TW,
                                                                                                                                                                                                                         30-NOV-1995;
                                                                                                                                                                                                                                                             30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9617072-A2
                                                                                                                                                WO9617072-A2
                                                                                                                                                                                    06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-JUN-1996
                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                            Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT30817;
```

ö

Gaps

.. 0

Polo JM;

Driver DA,

Matches

g ठ

```
stimulate an immune response
                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                          ö
                                                             PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytotoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and stimulate an immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR primers AAV42367-420 and AAV42422-54 are used in the course of the invention. The specification describes a DNA alphavirus structural protein expression cassette which comprises an inducible promoter and an alphavirus structural protein gene, where the promoter directs the expression of the alphavirus structural protein gene upon induction of the promoter within a cell, and where prior to induction within the cell, the expression cassette does not express sufficient quantities of structural proteins to be cytocoxic to a BHK cell containing the expression cassette. The products may be used to inhibit pathogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA alpha:virus structural protein expression cassettes - for producing
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Driver DA, Polo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA alphavirus; structural protein expression; inhibit; pathogen; immune response; stimulate; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                        81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33; 1; Indels ive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                         Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubensky TW,
                                                                                                                                                                                                                                                                                                                                                            4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                               Example 7; Col 103; 140pp; English
 recombinant alpha: virus particles
                                 Example 3; Col 69; 140pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jolly DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  recombinant alpha: virus particles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-00122791.
94US-00198450.
94US-00348472.
95US-00376184.
95US-00404796.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-00741881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Forward PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42426 standard; DNA; 52
                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 56.2%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chang SMW, Ibanez CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-446089/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-NOV-1994;
20-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-SEP-1993;
18-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USS789245-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV42426;
                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                          셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCR primers AAV60153-55 are used to amplify Hepatitis delta virus ribozyme sequence. The product is used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system. Descend the sequence of the envention of system. Descend the sequence of the system comprises a eukaryotic promoter 5' of viral CDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral CDNA. The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response to an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I-restricted or an HLA class II-restricted immune response. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                      Eukaryotic layered vector initiation system; stimulate; immune response;
                                                          Gарв
                                                            ö
                            DB 2; Length 52;
33;
                                                          IndelB
Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                            ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dubensky TW;
                                                                                       4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                        1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                          Query Match

81.1%; Score 30; DB
Best Local Similarity 56.2%; Pred. No. 33;
Matches 18; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 3; Col 71-72; 144pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jolly DJ,
                                                                                                                                                                                                   ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-00122791.
94US-00198450.
94WO-US010469.
94US-00348472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95US-00376184.
                                                                                                                                                                                                 AAV60154 Btandard; DNA; 52
                                                                                                                                                                                                                                                                                                        Nested PCR primer HDV17-68
                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                      Sindbis; PCR primer; ss.
                                                                                                                                                                                                                                                            (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POLO J M.
DUBENSKY T W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-541753/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (JOLL/) JOLLY D J.
(DRIV/) DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-OCT-1996;
                                                                                                                                                                                                                                                            25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                          04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                 US5814482-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-NOV-1994
                                                                                                                                                                                                                              AAV60154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POLO/)
(DUBE/)
                                                                                                                                                                    RESULT 14
                                                                                                                                                                                    AAV60154
```

```
Matches
                                                                                                                                                                                          Search cor
Job time
                                                      ଚ
                                                                                                       셤
                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryotic layered vector initiation system - containing eukaryotic promoter and heterologous antigen coding sequence, useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCR primers AAV60184-85 are used in the course of the invention. The specifiaction describes an eukaryotic layered vector initiation system, based on Sindbis. The eukaryotic layered vector initiation system comprises a eukaryotic promoter 5' of viral cDNA which initiates, in a susceptible target cell, 5' to 3' synthesis of RNA from the viral cDNA. The RNA comprises a vector construct which autonomously amplifies in the cell and expresses a heterologous nucleic acid sequence which encodes an antigen or modified form that stimulates an immune response to an antigen by introducing the vector into target cells, preferably by infection in vivo, especially where the immune response is a cell mediated, HLA class I restricted or an HLA class I restricted or an HLA class I restricted or an HLA class I restricted immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryotic layered vector initiation system; stimulate; immune response; Sindbis; PCR primer; ss.
                                                                                                               Gaps
                                                                                                            ö
                                             81.1%; Score 30; DB 2; Length 52; 56.2%; Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 30; DB 2; Length 52; Pred. No. 33;
                                                                                                            Indels
  Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52 BP; 9 A; 21 C; 14 G; 8 T; 0 U; 0 Other;
                                                                                                               1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jolly DJ, Dubensky TW;
                                                                                                                                                                                                  4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 5; Col 108; 144pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93US-00122791.
94US-00198450.
94WO-US010469.
94US-00348472.
95US-00376184.
                                                                                                                                                                                                                                                                                                                                                                85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.1%;
56.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-00739158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Reverse PCR primer HDV17-68
                                                                                                                                                                                                                                                                                                                                                             AAV60185 standard; DNA; 52
                                          Query Match
Best Local Similarity 56.27
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POLO J M.
DUBENSKY I W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Driver DA, Polo JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-541753/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOLLY D J.
DRIVER D A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-FEB-1994;
14-SEP-1994;
30-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
04-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US5814482-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                AAV60185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POLO/) I
(DUBE/) I
(JOLL/) G
(DRIV/) I
                                                                                                                                                                                                                                                                                                      AAV60185

AAV60185

AAV60185

XX
AAV60185

DJ AAV60185

DJT 25-MA

     g
                                                                                                                                                                   ઠે
                                                                                                                                                                                                                   셤
```

Sequence 18, Appl Sequence 5, Appli Sequence 5, Appli Sequence 6, Appli Sequence 1875, Ap

Sequence Sequence Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

```
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Danca, Carlos E.
APPLICANT: Thanca, Carlos E.
APPLICANT: Olly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Britis Burara A.
TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81.1%; Score 30; DB 1; Length 52; 56.2%; Pred. No. 8.2; ive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 6300 COLUMDIA CENTER, /UL FILLN AVENUE
CITYE: Washington
COUNTRY: US
ZIP: 98104-7092
COMPUTER: Floppy disk
COMPUTER: Floppy disk
COMPUTER: PACENTIN RELEASE #1.0, Version #1.25
SOFTWARE: PACENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
ATTORNEY, GARY INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,063
REFERENCE/DOCKET NUMBER: 30,0049,423C6 / 1146.007
TELECOMMUNICATION INFORMATION:
                                                                                              US-09-554-337-1
US-08-218-963A-12
US-09-415-785A-39
US-09-415-785A-39
US-08-944-65-39
US-09-415-900-39
US-09-67-38-963A-18
US-08-218-963A-18
US-08-218-963A-18
US-08-419-125-5
US-08-985-162-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 40, Application US/08741881
Patent No. 5789245
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECORPOSE: (206) 042. TELEPHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 40
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 56.23
Matches 18; Conservative
8100
14311
14311
14311
15538
1553
56
56
56
56
56
56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
; TOPOLOGY:
US-08-741-881-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-741-881-40
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 40, Appl
Sequence 80, Appl
Sequence 80, Appl
Sequence 80, Appl
Sequence 40, Appl
Sequence 40, Appl
Sequence 80, Appl
Sequence 80, Appl
Sequence 80, Appl
Sequence 80, Appl
Sequence 10, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 14, Appl
Sequence 12, Appl
Sequence 13, Appl
Sequence 14, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 13, Appl
                                                                                                                                           March 15, 2005, 10:18:52 ; Search time 61.3421 Seconds (without alignments) 986.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 25,
Sequence 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                               2405568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lssued Patents NA:*
1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                                                                                                                                                                                                                                                                         1 ggguccaccuccucgcggunnnnnngggcaugcsby 37
                   5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-741-881-40
US-08-741-881-80
US-08-739-158-40
US-08-739-158-40
US-08-739-167-40
US-08-739-167-40
US-08-931-869-40
US-08-931-869-40
US-09-350-399-40
US-09-330-40
US-09-331-12
US-08-66-695-12
US-08-66-695-12
US-08-538-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-08-238-963A-14
US-09-333-042-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-553-619B-25
US-08-553-619B-30
                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                1202784 segs, 818138359 residues
                      version :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                     - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 1.0
                   Gencore
Copyright (c) 1993
                                                                                                                                                                                                                        US-09-699-667E-65
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                     IDENTITY NUCDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                     OM nucleic
                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                               Run on:
```

ö

Gape

```
SEQUENCE CHARACTERISTICS:
    Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                         APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Joily, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCES: 128
CORRESPONDENCES: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 40, Application US/08739158
Patent No. 5814482
GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Folo, John M.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
TITLE OF INVENTION: ENGRRYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81.1%; Score 30; DB 1; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTAL: 0.02

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Exentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/741,881
FILING DATE: 30-CT-1996
CLASSIFICATION: 435
ATJORNEY/AGENT INFORMATION:
NAME: MCMASTERS, DAVIG D.
REGISTRATION NUMBER: 30,0040 40346 / 1146.007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           930049.423C6 / 1146.007
UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Mismatches
                                                                                                                           Sequence 80, Application US/08741881
Patent No. 5789245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 9300
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 56.2%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic acid
DEDNESS: single
DGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-739-158-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-741-881-80
                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Tolly, Douglas J.
APPLICANT: Driver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81.1%; Score 30; DB 1; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
ZIP: 98104-7092

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,158
FILING DATE: 30-OCT-1996
CLASSIFICATION NUMBER: 33-963
ATTORNEY/ACBNT INFORMATION:
ATTORNEY/ACBNT INFORMATION:
TELEFONMICATION NUMBER: 33-963
REFERENCE/DOCKET NUMBER: 33-963
TELEFONMICATION INFORMATION:
TELEFONMICATION TON SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Seattle
STATE: Washington
COMPRY: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: BATCHING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,158
FILING DATE: 30-CCT-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: MCMSABLES, DAY'd D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049,423D3 / 1146.012
TELECOMMUNICATION NUMBER: 930049,423D3 / 1146.012
TELECOMMUNICATION NUMBER: 930049,423D3 / 1146.012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 930049.423D3 / 1146.012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 128
CORRESPONDECE ADDRESS:
CORRESSER: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCACCTCCTCGGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 80, Application US/08739158
Patent No. 5814482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 56.2%
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid
EDNESS: single
```

```
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION SYSTEMS AND ALPHAVIRUS
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US 08/739,167
FILING DATE: 30-0CT-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCAMBER: 33,963
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423C7 / 1146.008
TELECOMMUNICATION INFORMATION:
                                                                                                                                                        JUNESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 56.2%; Pred. No. 8.2;
Matches 18; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Srephen M.W.
APPLICANT: Oolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYE
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                 ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 40, Application US/08404796 Patent No. 6015686
    Dubensky Jr, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 6300 Columb
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:

APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dolo, John M.

APPLICANT: Ibanez, Carlos E.

APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.

APPLICANT: Driver, David A.

APPLICANT: Belli, Barbara A.

APPLICANT: Belli, Barbara A.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                                                                                                                                    ö
                                                                                                        81.1%; Score 30; DB 1; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 52;
                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DCCKET NUMBER: 930049.423C7 / 1146.008
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                    4 UCCACCUCCUCGCGGUNNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81.1%; Score 30; DB 56.2%; Pred. No. 8.2;
                                                                                                                                                  13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13; Mismatches
                                                                                                                                                                                                                                                                                                                                          Sequence 40, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 80, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (206) 622-4900
TELEPAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 56.2<sup>§</sup>
Matches 18; Conservative
                                                                                                                                                  18; Conservative
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-739-158-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington
                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , TOPOLOGY:
US-08-739-167-40
                                                                                                                                                                                                                                                                                                  RESULT 5
US-08-739-167-40
                                                                                                        Query Match
                                                                                                                                                  Matches
```

a

```
CITY: Seattle
STATE: Washington
                                                                    Best Local Similarity
Matches 18; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 6015694
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
US-08-931-869-80
                                                                                                                                                                                                                                                                                                 US-08-931-869-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-931-869-40
US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Bell, Barbara A.
APPLICANT: Bell, Barbara A.
TITLE OF INVENTION: EVKARYOFIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                 SOFTWARE: Patentin Release #1.0, version #1.25
SOFTWARE: Patentin Release #1.0, version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 15-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MCAMBER: 33,963
REGISTRATION NUMBER: 930049,423C5 / 1146.006
TELECOMMUNICATION NUMBER: 930049,423C5 / 1146.006
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEPAX: (206) 622-4900
TELEPAX: (206) 622-4900
TELEFAX: (206) 622-4900
TELEFAX: (206) 622-631
INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
TYPE: nucleic acid
STREET SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
TYPE: nucleic acid
STREET SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGNIE: WABBINGTON

ZIP: 98104-7092

ZIP: 98104-7092

COUNTRY: US

MEDIUW TYER: FIDOPY disk

COMPUTER: IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/404,796

FILING DATE: 15-MAR-1995

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: MCMASTERES DAY(d D.

REGISTRATION NUMBER: 33,963

REFERENCE/DOCKET NUMBER: 930049.423C5 / 1146.006

TELECOMMUNICATION INFORMATION:

TELEPAK: (206) 622-4900

TELEPAK: (206) 622-4900

INFORMATION FOR SEQ ID NO: 80:

SEQUENCE CHARACTERISTICS:

LENGTH: 52 base pairs

LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             930049.423C5 / 1146.006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 81.1%; Score 30; DB Best Local Similarity 56.2%; Pred. No. 8.2; Matches 18; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 80, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seattle
Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: linear
US-08-404-796-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-404-796-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                      APPLICANT: Discousty Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Dance Carlos E.
APPLICANT: Chang, Carlos E.
APPLICANT: Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Brits OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
CORRESPONDENCES A.
ADDRESSEE: SEED and BERRY LLP
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
81.1%; Score 30; DB 3; Length 52; 56.2%; Pred. No. 8.2; ive 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 3; Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PAGENTIN STRIEM: PC-LUDS/MS-DOS
SOFTWARE: PAGENTIN RELEASE #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 16-SPE-1997
CLASSIFICATION 435
PRIOR APPLICATION APPR.
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTONNE ARENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,963
REFERENCE/TOCKET NUMBER: 930049.423C5 / 1146.006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPAX: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                              1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                  4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81.1%; Score 30; DB 56.2%; Pred. No. 8.2; cive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                    Sequence 40, Application US/08931869
Patent No. 6015694
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 80, Application US/08931869
; Patent No. 6015694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 56.2
Matches 18; Conservative
                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
```

```
Driver, Douglas J.
Driver, David A.
TITLE OF INVENTION: ENTRANOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                   CURRENT APPLICATION NAMBER: US/09/350,399
RILING DATE: 08-Jul-1999
CLASSIFICATION - (Unknown)
ATTORNEY AGENT INFORMATION:
NAME: MCMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049.423D1 / 1146.010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/350,399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear SEQUENCE DESCRIPTION: SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE DESCRIPTION: SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 30;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Dubensky Jr, Thomas W Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 80, Application US/09350399 Patent No. 6342372 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 56.2
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (206)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-350-399-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVESTIGATION SYSTEMS

TITLE OF INVESTIGATION SYSTEMS

TOADRESSES 128

CORRESPONDERS:

STREET: 6100 Columbia Center, 701 Fifth Avenue

STREET: 8aetile

STATE: Washington

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: 15M PC compatible
                               APPLICANT: Ibanez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Briver, David A.
APPLICANT: Briver, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                 STATE: Washington
COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,869
FILING DATE: 15-SPP-1997
CLASSIPICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMBARE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
SEQUENCE CHARACTERISTICS:
LENGTH: 52 base pairs
                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: GAJOG Columbia Center, 701 Fifth Avenue
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCACCTCCTCGGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
81.1%; Score 30;
Best Local Similarity 56.2%; Pred. No. Matches 18; Conservative 13; Mismatci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dubensky Jr, Thomas W
Dubensky Jr, Thomas W
Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 40, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                         STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-350-399-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-931-869-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
```

ö

Gaps ö

```
ZIF: 92660

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 52;
                  Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ALDRESS:
ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Cullman, Louis C.
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
                                                                                                                                                                   STREET: 840 NEWPORT CENTER DRIVE, SUITE 700 CITY: NEWPORT BEACH STATE: CALIFORNIA COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Been, Michael D.
APPLICANT: Resenstein, Sarah P.
APPLICANT: Persotta, Anne T.
TITLE OF INVENTION: ENZYMATIC RNA MOLECULES
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Pifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.1%; Score 30; DB 3 56.2%; Pred. No. 8.2; tive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; SEQUENCE DESCRIPTION: SEQ ID NO: 80:
US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/238,963A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 16, Application US/08238963A
Patent No. 5625047
GENERAL INFORMATION:
Chang, Stephen M.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 80: SEQUENCE CHARACTERISTICS: LENGTH: 52 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C.
SOFTWARE: Word Perfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 81.1
Best Local Similarity 56.2
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Word Perfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-238-963A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
                                                               ö
                                                                                                                                                                                                                                                                                                                       APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
Polo, John M.
Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
NUMBER OF SEQUENCES: 124
CORRESPONDENCE ADDRESS:
ADDRESSE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
STATE: CALLFORNIA
                  / Match 81.1%; Score 30; DB 3; Length 52; Local Similarity 56.2%; Pred. No. 8.2; nee 18; Conservative 13; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81.1%; Score 30; DB 3; Length 52; 56.2%; Pred. No. 8.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:

MEDLUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PRESEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 39,645
REGISTRATION NUMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
TELEPHONE: (949) 823.6000
TELEPHONE: (949) 823.6100
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
                                                                                                                                   1 TCCACCTCCTCGCGGTCCGACCTGGGCATCCG 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 UCCACCUCCUCGCGGUNNNNNNGGGCAUGCS 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/236,140A
FILING DATE: 22-Jan.1999
CLASSIFICATION: <UNKNOWID-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 80., Application US/09236140A
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas
Polo, John M.
Ibanez, Carlos E.
                                                                                                                                                                                                                                                            Sequence 40, Application US/09236140A Patent No. 6376236 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 52 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 56.2#
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
                                                                                                                                                                                                                   RESULT 13
US-09-236-140A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-09-236-140A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-236-140A-40
                      Query Match
                                                                                                          ò
                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
```

ö

Gaps

.. 0

```
| FILING DATE: May 5, 1994
| CLASSIFICATION: 435
| PRIOR APPLICATION DATE:
| APPLICATION DATE: 07/821,155
| ATORNEY/AGENT 07/001
| FILING DATE: January 13, 1992
| ATTORNEY/AGENT INFORMATION:
| REGISTRATION NUMBER: 32,327
| REFERENCE/DOCKET NUMBER: 32,327
| FELECOMMUNICATION NUMBER: 33,327
| FELECOMMUNICATION NUMBER: 33,337
| FELE
```

## THIS PAGE BLANK (USPTO)

CORED MAN TO TO TO

```
March 15, 2005, 10:06:47 ; Search time 1607.39 Seconds
(without alignments)
876.189 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                       68479088
                                                                                                                                                                                 US-09-699-667E-65
37
1 ggguccaccuccucgcggunnnnnngggcaugcsby 37
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                 34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                         IDENTITY NUCDX Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST: *
                                                                                                                                                                                 Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                            Run on:
```

SUMMARIES	Description	BQ360043 BQ360043 PM1-HN007	AI192713 AI192713 ge67c07.x	BI580076 BE74208.5	AW970713 EST382796	BF673679 602136403	BQ889958 AGENCOURT	AY401937 AY401937 Homo Bapi	BE724383 894075F05	BM660932 952043A11	BM134274 WHE0488 A	8 BZ894888	CA601344 CA601344 wll.pk001	BE445167 WHE1132 B	CC698821 CGUEU75TH	BM660931 952043A11	BH880075 ht50h02.b	CC698827 CC698827 OGUEU75TV	AZ125162 OSJNBb007	BF687835 602066894	CG353689 CG353689 OGYBN42TV	CG226917 CG226917 OGWGW80TH	CG051528 CG051528 PUJCL90TD	CG175771 PUKCI38TB	***************************************
	н	08	AI	IB I	AW.	BF	80	) AY	BE	BM	E B	3 BZ	5 	BE	8	BW BW	HH H	S	3 AZ	BF	8	8	8	8	
	20		_	4			u,	·		4	4	ω.			on 	4	ω	-	<u>س</u>	~		-	-		•
	Query Match Length DB	396	490	566	595	899	1029	2338	559	338	476	477	515	586	603	628	697	773	808	810	855	913	923	976	
d	Query Match	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	
	Score	28	28	28		28	28	28	27.8	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	
	Result No.	: :	7	e	4	ស	y	7	80	0	10	11	12	13	14	15	16	11	18	19	20	21	22	23	;
		•																		υ		υ			

BX914300 BX914300 BX485553 BJ485553 CN035660 MT 7 II T BR953046 894067H12 B1999797 1031078G1 B1752495 1031078G1 B1752495 1031078G1 B152825 102408G1 B452825 104406G1 B452825 104406G1 CG207019 GGZAP3TH CG15483 104 340 1 BZ638091 GGZAP3TH CG154835 104 340 1 BZ638091 GGZAP3TTH CG207019 GGZAP3TTH CG3748313 GGMEP43TTH CG3748333 GGMEP43TTV	ALIGNMENTS  396 bp mRNA linear EST 20-MAY-2002 1101-005-d10 HN0079 Homo sapiens cDNA, mRNA sequence. 1:21028363  [human] azoa; Chordata; Craniata; Vertebrata; Euteleostomi; astoa; Chordata; Craniata; Vertebrata; Euteleostomi; Garcia; Primates; Catarrhini; Hominidae; Homo. 396) Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Carvalho, A.F., Mataukuma, A., Badin, S., Costa, F.F., Carvalho, F., Mataukuma, A., Bada, G.S., Simpson, D.H., deOliveira, P.S., Bucher, P., Jongeneel, C.V., soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and oring of the human transcriptome with ORF expressed	A. 97 (7), 3491-3496 (2000)  cs Research 109, 4 andar, 01509-010, Sao Paulo-SP,  rom the FAPESP/LICR Human Cancer Genome seen in the following URL 0xt4=1) ct 28 55.  piens"  normal; Vector: puc18; Site_1: Smal; n-1-library was made by cloning products
BX914300 BJ48553 BR453046 B1999797 B1725495 B1725495 B1725495 B1725495 B1725495 B1725495 B1725495 B1725495 B1725495 B17369049 B2734795 CC692415 CC74631	ALIGNMENTS  396 bp  1:21028363  (human)  tazoa; Chordata; Cran. heria; Primates; Catan. 0 396)  Garcia Correa, R., Ve. a Silva, W. Jr., Zago.! Carvalho, A.F., Matsul. deOliveira, P.S., Bucl Soares, F., Brentani, R.	Genetics Genetics Genetics Cancer Res Idente 109, Ig.org.br cived from can be seer Cybr/scrip 01-01-10&c4  rward rward of seer cived from can be seer cived from cived f
N 4 7 7 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5	-005 a a a a a a b c c a a b c c a a b c c a a b c c a a c c a a c c a a c c a a c c a a b c c a b c c a b c c a b c c a b c c a b c c a b c c a b c c a b c c c a b c c c a b c c c a b c c c a b c c c a b c c c c	
707 3313 3317 3310 5310 6610 726 726 727 729 729 729 729 7313 7313 7313	9-100101-005 1 GI:210283 ens (human) ens (	Lagge 1. Acad. Sci. U.S Simpson A.J.G.  y of Cancer Genet stitute for Cancer Genet stitute for Cance Antonio Prudente 11-2704922 in pson@ludwig.org ence was derived ence was derived should good bry sequence stop ity sequence stop Location/Qualifie. Ity Sequence stop Location/Gualifie. Ity Sequence stop Location/Gualifie. Ity Sequence stop Location Ity Sequence stop Location Ity Sequence Ity Sequence Seq
22 - 24 - 24 - 24 - 24 - 24 - 24 - 24 -	NO043 NO043 NO43 NO43 NO43 NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOCCA NOC	sequence tags Proc. Natl. Acad. Sci. U.S 20202663 10737800 10737800 Laboratory of Cancer Genet Ludwig Institute for Cance Rua Prof. Antonio Prudente Brail: 455-11-270492 Tel: +55-11-2707001 Fmail: asimpson@ludwig.org This sequence was derived Project. This entry can be (http://www.ludwig.org br/ 100101-005-d10&rg.br/ 10010101-005-d10&rg.br/ 10010101010101010101010101010101010101
7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7	BO36 BO36 BO36 BO36 BO36 BO36 BO48 BO48 BO48 BO48 BO48 BO48 BO48 BO48	
00000000000000000000000000000000000000	RESULT 1 BQ360043/c LOCUS DEFINITION ACCESSION VERSION VERYWEDS SOURCE ORGANISM REFERENCE AUTHORS	JOURNAL MEDLINE PUBMED COMMENT COMMENT SOUICE
00 0 0 00 000 00	RESUL BQ360 LOCUS DCCES VERSI VERSI SOURC ORG AUT	O O E E E E E E E E E E E E E E E E E E

```
derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) pofiles into the PUC 18 vector. Reverse transcription of tissue mRNA and CDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                 EST 29-0CT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     normalization to a Cot = 5. Library constructed by Bento Soares and M.Fatima Bonaldo. This library was constructed from the same fetus as the fetal heart library, Soares fetal heart NBHI30W."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT/T3 vector (Pharmacia). Library went through one round of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 490)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 1753 Std Error: 0.00
Seq primer: -40UP from Gibco
High quality sequence stop: 489.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                            AI192713

qe67c07.xl Soares fetal lung NbHL19W Homo sapiens cDNA clone
IMAGE:1744044 3' Fimilar to TR:Q08174 Q08174 PROTOCADHERIN 42
PRECURSOR ;contains TAR1.tl TAR1 repetitive element ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            75.7%; Score 28; DB 1; Length 490; 50.0%; Pred. No. 1.3e+03;
                                                                                                                                                             75.7%; Score 28; DB 5; Length 396; 50.0%; Pred. No. 1.3e+03;
                                                                                                                                                                                                              4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4; Indels
                                                                                                                                                                                                                                                                               142 GGTCCACCTCCTCGATGACGGCTTCGGGCTTGCGGC 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             426 GGTTCACCTCCTCGCGGTCGATCCGGTGCAGGACGC 391
                                                                                                                                                                                                                                                        2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                         14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:1744044"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AII92713
AI192713.1 GI:3743922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                              18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AI192713/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                    쉱
```

```
AW970713 595 bp mRNA linear EST 01-JUN-2000
EST382796 MAGE resequences, MAGK Homo sapiens cDNA, mRNA sequence.
AW970713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Organ: embryo; Vector: pFlc1; Site_1: XhoI; Site_2: BamHI; Library was kindly generated by Piero Carninci at the RIKEN. The library was normalized and excised using Cre recombinase. Plasmid cDNA library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                               EST 06-SEP-2001
                                       BISB0076

RE74208.5prime RE Drosophila melanogaster normalized Embryo pFlc-1
Drosophila melanogaster cDNA clone RE74208 5 similar to Antp:
FBAN0001028 GO: Inucleus (GO:0005634); specific RNA polymerase II
                                                                                                                                                                                                                                                                                                    Drosophila melanogaster
Eukaryota, Metazoa, Arthropoda, Hexapoda, Insecta; Pterygota;
Eukaryota, Metazoa, Arthropoda, Hexapoda, Insecta; Pterygota;
Bobgera, Endopterygota; Diptera, Brachycera; Muscomorpha;
Ephydroidas, Drosophilidae; Drosophila.

(Dasses 1 to 566)
Stapleton, M., Brokstein, P., Hong, L., Tyler, D., Berman, B.,
Carlson, J., Champe, M., Chavez, C., Dorsett, V., Farfan, D., Frise, E.,
George, R., Gonzalez, M., Quarin, H., Harris, N., Li, P., Liao, G.,
Misra, S., Mungall, C.J., Nunco, J., Pacleb, J., Paragas, V., Park, S.,
Phouanenavong, S., Wan, K., Yu, C., Lewis, S.B., Celniker, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="0-24 hours mixed stage embryonic"
/lab_host="DH5-alpha TonA"
/clone_lib="RE Drosophila melanogaster normalized Embryo
pFlc-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        est@fruitfly.berkeley.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75.7%; Score 28; DB 4; Length 566; 50.0%; Pred. No. 1.3e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lawrence Berkeley National Lab
One Cyclotron Rd, Berkeley, CA 94720, USA
Fax: 510 486 6798
Email: http://www.fruitfly.org/EST, est@fruitfly.
hit genomic AE003673: arm:3R [2604647,2914003]
estimated-cyto:94A5-94C1: 05/18/2001
Plate: RE.742 row: A column: 8
High quality sequence stop: 565.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1..566
/organism="Drosophila melanogaster"
/mol_type="mRNA"
/db_xref="taxon:7227"
/clone="RE74208"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            375 GGTCCATCCCCTGGCCGTTGTAGTAGGGCATGCGGT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BDGP/HHMI RE Drosophila EST Project
Unpublished (2001)
                                                                                                                                                                                                                                                                                 Drosophila melanogaster (fruit fly)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'sex="male and female"
                                                                                                                                                                               05/18/2001, mRNA sequence.
                                                                                                                                                                                                                                  BI580076.1 GI:15471498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW970713.1 GI:8160558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Stapleton, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 50.0°
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
RESULT 3
BI580076/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW970713/c
                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
```

```
/organisma"Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6182197"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ889958.1 GI:22281972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sex="male"
                                                                                                                                                                   Query Match 75.74
Best Local Similarity 50.09
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . .1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ889958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                       BQ889958/c
                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 21-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="INAGE:4272768"
/lab_host="DH10B (T1 phage-resistant)"
/clone_lib="NIH MGC_81"
/clone_lib="NIH MGC_81"
/note="Organ: prostate; Vector: pDNR-LIB (Clontech);
Site_1: Sfil (ggccgctcggcc); Site_2: Sfil
(ggccattagggcc); S and 3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-CACGGCCATTATGGCC_3'
and 3' adaptor sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 899)
                                                                                       of colon tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      602136403F1 NIH MGC_83 Homo Bapiens cDNA clone IMAGE:4272768 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbe-remail.nih.gov
Tissue Procurement: CLONETECH Laboratories, Inc.
CDNA Library Preparation: CLONETECH Laboratories, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LiNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Float.com/Consortium/LLNL at:
LLCM1087 row: f column: 01
High quality sequence stop: 585.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC http://mgc/.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
1 (bases 1 to 595)
Hegde, P., Qi, R., Abernathy, K., Dharap, S., Gaspard, R., Gay, C.,
Holt, I.E., Saeed, A.I., Sharov, V., Lee, N.H., Yeatman, T.J. and
Quackenbush, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 595
                                                                                 Assessment of gene expression patterns in a model metastasis using a 19,200 element cDNA microarray Unpublished (2000)
Contact: John Quackenbush
The Institute for Genomic Research 9712 Medical Center Dr., Rockville, MD 20850, USA Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                   /mol type="mRNA"
/db xref="taxon:9606"
/clone lib="MAGE resequences, MAGK"
/note="Vector: pBluescriptSKm"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            75.7%; Score 28; DB 2; I 50.0%; Pred. No. 1.3e+03; ive 14; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      899 bp
                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BF673679.1 GI:11947574
                                                                                                                                                                                                                                              Email: johnq@tigr.org
Plate: 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens (human)
                                                                                                                                                                                                                                                                                          Seg primer: Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 50.09
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                             1. .595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BF673679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF673679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
BF673679/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                   TITLE
                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
```

ઠે 셤

```
/clone lib="Lupski dorsal root ganglion"
/clone lib="Lupski dorsal root ganglion"
/note="Vector: pGWV-SPORT6 (Life Technologies); Site_1:
NotI; Site_2: SalI; cDNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
5.-TCGACCACGGGTCG-3' and
5.-GACTAGTTCTAGAPTCGAGACGGCGCCCT(15)-3'. Size selected >
1 kb for average insert length 1.7 kb. This is a primary library non-amplified. Library constructed by Life Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor College of Medicine) and is available through Life Technologies."
5'-ATTCTAGAGGCCGAGGCGGCATG-dT(30)BN-3' (where B = A, C, or G and N = A, C, G, or T). Average insert size 1.4 kb (range 0.5-4.0 kb). 14/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA)."
                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 16-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM13567 row: m column: 14
High quality sequence stop: 456.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

    (bases 1 to 1029)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ889958
AGENCOURT 8228912 Lupski_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:6182197 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 102)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1029;
                                                                                                                                                                                                                                                       Length 899;
                                                                                                                                                                                                                                                                                                                     4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'tissue type="dormal root ganglia"
'dev stage="adult, 36 yr"
'lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                          334 GGTCCACCTCCATGACGGGCTCGGGCTTGCGGC 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                   2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                           75.7%; Score 28; DB 2; I 50.0%; Pred. No. 1.4e+03; iive 14; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75.7%; Score 28; DB 5; I 50.0%; Pred. No. 1.4e+03; iive 14; Mismatches 4;
```

VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

ACCESSION

AY401937/c DEFINITION

RESULT

셤

```
/note="Vector: pBluescript II SK-; Site_I: EcoRI; Site_2: XhoI; This library, constructed by John Davies and Jeffrey McDermott, combines coMAs from CC-1690 cells grown to mid-log phase in TAP (acetate-containing) medium in the light, TAP medium in the dark, HS (minimal) medium in the light, TAP medium in the dark, HS (minimal) medium in ambient levels of CO2 and HS medium bubbled with 5% CO2. PolyA mRNA was purified from each sample, pooled and cDNA synthesized. The cDNA was directionally cloned into lambda ZAP II (Stratagene) in the EcoRI (5') and XhoI (3') sites. pBluescript II SK- plasmids were excised from the lambda ZAP clones by superinfection with ExAssist (Stratagene) phage. The library was normalized using method 4 described in Bonaldo et al (1996) Genome Research 6: 791-806."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         אווויסטעאטע 338 bp mRNA linear EST 27-FEB-2002
952043A11.y1 952 - BMS tissue from Walbot Lab (reduced rRNA) Zea
mays cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                    clone_lib="C. reinhardtii CC-1690, normalized, Lambda Zap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/mol_type="mRNA"
/cultivar="BNS (Black Mexican Sweet)"
/cultivar="BNS (Black Mexican Sweet)"
/cultivar="tops (Black Mexican Sweet)"
/tissue type="suppension culture"
/dev_stage="mixed logarithmic and stationary growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maize ESTs from various cDNA libraries sequenced at Stanford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75.1%; Score 27.8; DB 2; Length 559; 61.3%; Pred. No. 1.6e+03; ive 10; Mismatches 2; Indels (
                                                                                                                                                                                                                         organism="Chlamydomonas reinhardtii"
                                                                                                                                                                                                                                                                                        mt+ 21gr"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stanford University
855 California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2227
Fax: 650 728 8221
Email: walbot@stanford.edu
Plate: 952043 row: A column: 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404 GGGCCCACCTCCTCGCTGTAGTCACCGGGCA 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCA 31
                                                                                                                                                                                                                                                    /mol_type="mRNA"
/strain="CC-1690 wild type
/db_xref="taxon:3055"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
Contact: Walbot V
Department of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .338
/organism="Zea mays"
                                                                                                                                                                   Location/Qualifiers
                                                                                                                                         Email: chauser@duke.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM660932
BM660932.1 GI:18964311
                          Duke University
Durham, NC 27708-1000
Tel: 919 613 8159
Fax: 919 613 8177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19; Conservative
DCMB Box 91000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 19; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 University

    (bases
Walbot, V.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
BM660932/c
                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE724383 559 bp mRNA linear EST 14-SEP-2000 894075F05.x1 C. reinhardtii CC-1690, normalized, Lambda Zap II Chlamydomonas reinhardtii cDNA, mRNA sequence.
                                                                                                                                            AY401937 2338 bp DNA linear GSS 15-DEC-2003
Homo sapiens PCDH7 gene, VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 2338)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Clark, A.G., Glanowski, S., Nielson, R., Lu, F., Murphy, B.,
Ferriera, S., Wangy, G., Zheng, X.H., White, T.J., Sninsky, J.J.,
Adams, M.D. and Cargill, M.
Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                                                                                                                                                                                                           Eukaryoča, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Viridiplantae, Chlorophyta, Chlorophyceae, Volvocales,
Chlamydomonadaceae, Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grossman, A., Davies, J., Federspiel, N., Harris, E., Lefebvre, P., McDermott, J.P., Silflow, C., Stern, D. and Surzycki, R. Analyses of the Chlamydomonas reinhardtii Genome: A Model, Unicellular System for Analyzing Gene Function and Regulation in Vascular Plants; project phase 2
Unpublished (2000)
Contact: Charles Hauser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 (bases 1 to 2338)
Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A.,
Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu.F., Murphy,B.,
Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            75.7%; Score 28; DB 9; Length 2338; 50.0%; Pred. No. 1.4e+03;
  GGTTCACCTCCTCGCGGTCGATCCGGTGCAGGACGC 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           266 GGTTCACCTCCTCGCGGTCGATCCGGTGCAGGACGC 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .2338
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="PCDH7"
/locus_tag="HCM1057"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chlamydomonas reinhardtii
Chlamydomonas reinhardtii
                                                                                                                                                                                                       genomic survey sequence
                                                                                                                                                                                                                                                             AY401937.1 GI:39757923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BE724383.1 GI:10125679
                                                                                                                                                                                                                                                                                                                   sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 559)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 50.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14671302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE724383
                                                                                                                                                                                                                                                                                                                        Homo
```

Query Match

ઢ a

ORIGIN

VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

TITLE

DEFINITION

RESULT 8 BE724383

ACCESSION

JOURNAL

source

FEATURES

COMMENT

gene

TITLE JOURNAL

REFERENCE AUTHORS

JOURNAL PUBMED

TITLE

```
/note="Vector: pUC19; Site_1: EcoRI; Site_2: EcoRI; The library was prepared by George Rudenko using poly (A) selected RNA and Universal Riboclone cDNA Synthesis System (Promega). CDNA was synthesized using both random and oligo(dT) primers in separate reactions and equipped with EcoRI adaptors. Library was size-fractionated on agarose gels (for insert size >4000ps) and non-directionally cloned into EcoRI-dispected pUC19 vector. Blue/white selection on carbenicillin-containing plates was used to recover
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Olin Anderson
US Department of Agriculture, Agriculture Research Service, Pacific
West Area, Western Regional Research Center
800 Buchanan Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: oandersn@pw.usda.gov
Sequences have been trimmed to remove vector sequence and low
Sequences have been trimmed score less than 20. No effort was taken
quality sequence with phred score less than 20. No effort was taken
to identify ESTs of fungal origin from this library, thus this EST
could be of wheat or fungal origin.
Seq primer: Stratagene &K primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 28-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryotta; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae; Triticeae; Triticeae; Triticum.

1 (bases 1 to 476)
Anderson,O.D., Chao,S., Han,P.S., Heinen,S., Hsia,C.C., Kang,Y., Kruger, W.M., Lazo,G.R., Miller,S., Muchlbauer,G.J., Miller,R., Wilsen,C.C., Rausch,C.J., Seaton,C.L., Tong,J.C., Vance,C. and Wilson,C.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'clone_lib="Wheat Fusarium graminearum infected spike cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector: Lambda Uni-ZAP XR, excised phagemid pBluescript SK; Site 1: EcoRI; Site 2: XhoI; Plants were grown in the greenhouse. Spikes were sprayed at anthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WHE0488 A04 A08ZS Wheat Fusarium graminearum infected spike cDNA
library Triticum aestivum cDNA clone WHE0488 A04 A08, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the wheat
lab_host="DH10B"
clone_lib="952 - BMS tissue from Walbot Lab (reduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ane structure and function of the expressed portion of the genomes - Fusarium graminearum infected spike cDNA library Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 338;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Score 27.4; DB 4; Length 3; Pred. No. 2.2e+03; 14; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164 GGGTCCACGTCCTCGCCAGAGGAGCACGCCGT 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:4565"
/clone="WHE0488_A04_A08"
/tissue_type="Spike"
/dev_stage="Adult_lalnt"
/lab_host="E. coli SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 476 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Triticum aestivum (bread wheat)
Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/cultivar="Sumai3"
                                                                                                                                                                                                                                                                                                                                                                        positive clones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM134274.1 GI:17141848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 74.1
Best Local Similarity 48.6
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rel: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5105595818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM134274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
```

VERSION

DRIGIN

ઠ 셤 TITLE

COMMENT

```
CABUL344 515 bp mRNA linear EST 21-NOV-2002 wll.pk0012.b7 wll Triticum aestivum cDNA clone wll.pk0012.b7 5' end, mRNA sequence.
with Fusarium graminearum. Total RNA, and poly(A) RNA were prepared and pooled from infected spike at 0, 6, 12, 24, 36 and 48 hours after inoculation, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in G. Muehlbauer lab at the University of Minnesota (Kruger, W.M., Muehlbauer, G.J., Pritsch, C., Vance, C.). The cDNA library should contain genes of both wheat and fungal pathogen origin. Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSS 30-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:43928"
/clone_lib="Hg pUC18 Library"
/note="Vector: pUC18, Site_1: Smal; A shotgun library was
constructed from Halobaculum gomorrense genomic DNA using
pUC18/Smal/BAP plasmid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Halobacteriaceae, Halobaculum.

1 (bases 1 to 477)
Goo, Y., Roach, J., Glusman, G., Baliga, N.S., Deutsch, K., Pan, M., DasSarma, S., Ng, W.Y. and Hood, L.
Low-pass Sequencing for Microbial Comparative Genomics Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hg4_0179 Hg pUC18 Library Halobaculum gomorrense genomic 5'
                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Halobaculum gomorrense
Halobaculum gomorrense
Archaea; Buryarchaeotte, Halobacteria; Halobacteriales;
                                                                                                                                                                                                                                                     74.1%; Score 27.4; DB 4; Length 476; 48.6%; Pred. No. 2.2e+03; ive 14; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 477;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Institute for Systems Biology
1441 North 34th Street, Seattle, WA 98103, USA
12 206 732 1412
Fax: 206 732 1299
                                                                                                                                                                                                                                                                                                                                                                 gomorrense"
                                                                                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGUCCACCUCCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74.1%; Score 27.4; DB 8; 54.1%; Pred. No. 2.2e+03; iive 12; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/strain="ATCC 700876"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Halobaculum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      477 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: ygoo@systemsbiology.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BZ894888.1 GI:33345364
                                                                                                                                                                                                                                                                                                18, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           shotgun.
                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 Similarity
20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BZ894888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CA601344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
BZ894888/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CA601344
                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
1. .603
/organism="Zea mays"
/mol_type="genomic DNA"
/strain="B73"
Seq primer: Stratagene SK pr:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (2002)
Other_GSS8: OGUEU75TV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 301-838-5843
Fax: 301-838-0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seq primer: TR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TIGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC698821/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Olin Anderson
US Department of Agriculture, Agriculture Research Service, Pacific
West Area, Western Regional Research Center
800 Buchanan Street, Albany, CA 94710, USA
Tel: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE445167 58-JUL-2000 WHE1132_B07_D14ZS Wheat etiolated seedling root normalized cDNA library Triticum aestivum cDNA clone WHE1132_B07_D14, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta; Liliopsida, Poales, Poaceae; Spoideae, Triticum.

1 (bases 1 to 515)
Tingey,S.V., Powell,W., Wolters,P., Dolan,M., Hainey,C., Yuan,Z., Miao,G., Caraher,N. and Hanafey,M.K.
DuPont What cDNA Sequence
Unpublished (2002)
Contact: Scott V. Tingey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Triticum aestivum

Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.

(bases 1 to 586)

Anderson, O.D., Chao, S., Choi, D.W., Close, T.J., Penton, R.D.,
Han, P.S., Hsia, C.C., Kang, Y., Lazo, G.R., Miller, R., Nguyen, H.T.,
Rausch, C.J., Seaton, C.L., Tong, J.C. and Zhang, D.
The structure and function of the expressed portion of the wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mcglucar="North wheat"
/cultivar="Spring wheat"
/cultivar="Spring wheat"
/clome="Will: pk0012.b7"
/tissue type="leaf"
/clome lib="w1"
/clome lib="w1"
/note="Vector: pBluescript SK+; Site_1: EcoRI; Site_2: Shol; Whol; Wheat (Triticum aestivum L.) leaf 7 day old seedling, light grown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: oandersn@pw.usda.gov
Sequence have been trimmed to remove vector sequence and low
quality sequence with phred score less than 20
                                                                                                                                                                                                                                                                                          E. I. DuPont de Nemours and Company
1 Innovation Way, P.O. Box 6104, Newark, DE 19714-6104, USA
1 Innovation Way, P.O. Box 6104, Newark, DE 19714-6104, USA
121: 302-631-2607
Fax: 302-631-2607
Email: Scott.V. Tingey@USA.dupont.com
Seq primer: M13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74.1%; Score 27.4; DB 6; Length 515; 48.6%; Pred. No. 2.2e+03; tive 14; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65 GCGTCCACCTCCTCGCTGCGACTGCCGGCCATGTCTT 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGUCCACCUCGCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Triticum aestivum (bread wheat)
                                          Triticum aestivum (bread wheat)
                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
  GI:25156506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE445167.1 GI:9444723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 48.69
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (2000)
                                                                     Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fax: 5105595818
                                                                                                                                                                                                                                                                                  Crop Genetics
    CA601344.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE445167
LOCUS
DEFINITION
                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
```

ઠ 셤

```
/note="Vector: Lambda Uni-ZAP XR, excised phagemid pBluescript SK; Site_1: BcoRI; Site_2: XhoI; Seeds were surface-sterilized, germinated and grown seeptically in the dark at room temperature on filter paper with water, nystatin and cefotaxime in covered crystallization dishes. Roots were prepared, a CDNA library was made in the poly(A) RNA were prepared, a CDNA library was made in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside. The cDNA clones were in vivo excised to give pBluescript phagemids before normalization was carried out. The mass excision of phagemid library and normalization were done in HT Nguyen lab by D. Zhang at Texas Tech University. Normalization proporcol used was that of Soares. Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GOUSTICE STATE OF THE GOOD DNA LINEAR GSS 19-JUN-2003 GENEUTSTH ZM 0.7 1.5 KB Zea mays genomic clone ZWMBMa0424M05, GOOGSB821. CC698821. GI:32103597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                        /dev_stage="Five day old etiolated seedling"
/lab_host="E. roli DH10B"
/clone_lib="Wheat etiolated seedling root normalized cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zea mays
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 603)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T.,
Whitelaw, C.A., Fuser, C.M., Budiman, M.A., Bedell, J.A., Rohlfing, T.,
Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N.
Consortium for Maize Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.1%; Score 27.4; DB 2; Length 586; 48.6%; Pred. No. 2.2e+03; ive 14; Mismatches 5; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9712 Medical Center Drive, Rockville, MD 20850, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGUCCACCUCCCCGGGUNNNNNNGGGCAUGCSBY 37
organism="Triticum aestivum"
                                /mol_type="mRNA"
/cultivar="Chinese Spring"
/db_xref="taxon:4565"
/clone="WHE1132 B07_D14"
/tissue_type="Root"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Class: sheared ends.
Location/Qualifiers
```

```
Jose="Vector: pUC19; Site_1: EcoR1; Site_2: EcoR1; The library was prepared by George Rudenko using poly (A) selected RNA and Universal Riboclone CDNA Synthesis System (Promega). CDNA was synthesized using both random and oligo(dT) primers in separate reactions and equipped with EcoR1 adaptors. Library was size-fractionated on agarose gels (for insert size >400bp) and non-directionally cloned into EcoR1-digested pUC19 vector. Blue/white selection on carbenicillin-containing plates was used to recover positive clones."
                                                                                                                                                                                                                        ó
                                                                                                                                                                                                                                                                                                                                                                                                                                           BM660931 628 bp mRNA linear EST 27-FEB-2002
952043A11.X1 952 - BMS tissue from Walbot Lab (reduced rRNA) Zea
mays CDNA, mRNA sequence.
BM660931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (lab_host="DH10B"
clone_lib="952 - BMS tissue from Walbot Lab (reduced
                                                                                                                                                                                                                          Gaps

    (bases 1 to 628)
    Walbot, V.
    Maize ESTs from various cDNA libraries sequenced at Stanford

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:4577"
/tissue_type="suspension culture"
/dev_stage="mixed logarithmic and stationary growth
phases"
/db_xref="taxon:4577"
/clone="zwwBwa0424405"
/clone=lib="zw_0.7 1.5_KB"
/note="vbccr: pBGSK-; Site 1: Hincll; 0.7-1.5 kb
methylation filtered genomic DNA library"
                                                                                                                                                                                                                        ö
                                                                                                                                                                  Query Match
74.1%; Score 27.4; DB 9; Length 603;
Best Local Similarity 48.6%; Pred. No. 2.2e+03;
Matches 18; Conservative 14; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 .628
/organis="Zea mays"
/mol_type="mRNA"
/culTivar="BMS (Black Mexican Sweet)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unividiately
Contact: Walbot V
Contact: Walbot V
Department of Biological Sciences
Stanford University
Tel: 650 723 2227
Fax: 650 725 8221
                                                                                                                                                                                                                                                                                                    398 GGGTCCACGTCCTCGCCAGAGGAGCACGCCGT 362
                                                                                                                                                                                                                                                                           1 GGGUCCACCUCCCCCGGUNNNNNNGGGCAUGCSBY 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: walbot@stanford.edu
Plate: 952043 row: A column: 11.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM660931.1 GI:18964309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
BM660931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                      임
```

ö

Gaps

ö

74.1%; Score 27.4; DB 4; Length 628; 48.6%; Pred. No. 2.2e+03; tive 14; Mismatches 5; Indels (

Query Match
Best Local Similarity 48.6
Matches 18; Conservative

574 GGGTCCACGTCCTCGCAGAGGAGCACGCCGT 610

1 GGUCCACCUCCUCGCGGUNNNNNGGGCAUGCSBY 37

ઠ 셤

Search completed: March 15, 2005, 15:20:40 Job time : 1613.39 secs

THIS PAGE BLANK (USPTO)

us-09-699-667e-66.siz.rni

```
APPLICATION NUMBER: US 07/216,390 FILING DATE: 07-JUL-1988 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 15, 2005, 15:26:58; Search time 33.2456 Seconds (without alignments) 984.356 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seguence 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                     Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*

(cgn2_6/ptodata/1/ina/5B_COMB.seq:*

(cgn2_6/ptodata/1/ina/6A_COMB.seq:*

(cgn2_6/ptodata/1/ina/6B_COMB.seq:*

(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-096-027-4
US-08-460-911-4
US-09-073-492-5
US-08-73-158-41
US-08-739-158-41
US-08-339-167-41
US-08-339-167-41
US-08-3139-167-41
US-09-356-140A-41
US-09-356-140A-41
US-09-356-140A-41
US-08-739-1881-79
US-08-736-739-79
US-08-736-739-79
US-08-736-739-79
US-08-736-739-79
US-08-736-739-79
US-08-736-739-79
US-08-736-739-780
US-08-736-757-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -08-475-228A-282
-08-482-080A-282
                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-354-947-282
                                                                                                                                                                                                                        1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                  - nucleic search, using sw model
                                                                                                                                                      1 bksgcauggcuaagggaccc 20
                                                                                                                                                                                IDENTITY NUCDX Gapop 10.0 , Gapext 1.0
                                                                                                                              US-09-699-667E-66
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length DB
                                                                                                                                                                                                                                                                            Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Match
                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic
                                                                                                                                                                                                                                                                                                                                                                        Database :
                                                                                                                                                         Sequence:
                                                                                                                                                                                                                         Searched:
                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

	Sequence 306, App	Sequence 307, App	Sequence 307, App	Sequence 10, Appl	Sequence 10299, A	Sequence 10300, A	Sequence 33, Appl	Sequence 67, Appl	Sequence 27956, A	Seguence 18244, A	Sequence 48582, A	Sequence 48583, A	Sequence 48584, A	Sequence 54, Appl	Sequence 54, Appl	Sequence 54, Appl	
PCT-US93-12388-282	US-U9-U6U-Z99-3U6 US-09-402-923A-306	US-09-060-299-307	US-09-402-923A-307	US-07-889-651-10	US-09-396-196G-10299	US-09-396-196G-10300	US-09-518-914-33	US-09-475-947A-67	US-09-513-999C-27956	US-09-396-196G-18244	US-09-396-196G-48582	US-09-396-196G-48583	US-09-396-196G-48584	US-08-612-895A-54	US-09-093-293-54	US-09-459-553-54	
ហ	4 4	4	4		4	4	ო	4	4	4	4	4	4	Н	٣	m	
74	8 8	40	40	20	25	25	32	48	9	52	25	25	52	37	37	37	
68.0	67.0	67.0	67.0	64.0	64.0	64.0	64.0	64.0	64.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	
13.6	13.4	13.4	13.4	12.8	12.8	12.8	12.8	12.8	12.8	12.6	12.6	12.6	12.6	12.6	12.6	12.6	
28	30	31	32	33	c 34	c 35	c 36	c 37	c 38	ი 39	40	41	42	43	44	45	

## ALIGNMENTS

```
Sequence 4, Application US/08096027
; Sequence 4, Application US/08096027
; Patent No. 5531632
; GENERAL INFORMATION:
APPLICANT: O'Donnell, Michael A.
APPLICANT: Duda, Rosemary B.
APPLICANT: DeWolf, William C.
APPLICANT: Aldovini, Anna
APPLICANT: Young, Richard A.
TILE OF INVENTION: RECOMBINANT BCG VACCINES
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
CITY: Lexington
CITY: Lexington
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US /08/096,027
FILING DATE: 22-JUL-1993
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/711,334
FILING DATE: 06-JUN-1991
PRIOR APPLICATION NUMBER: US 07/711,334
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/367,894
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/367,894
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/367,894
FILING DATE: 18-JUN-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/367,894
FILING DATE: 18-JUN-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DESTAURATION DATA:
APPLICATION NUMBER: DESTAURATION DATA:
APPLICATION DATA:
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRICATION NUMBER: PCT/USB9/02962
FILING DATE: 07-JUL-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/361,944
FILING DATE: 05-JUN-1989
PRIOR APPLICATION DATA:
PILING DATE: 22-JUL-1988
PRIOR APPLICATION DATA:
```

```
Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      72.0%; Score 14.4; DB 1; Length 39; larity 77.8%; Pred. No. 4.4e+02; Conservative 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: O'Donnell, Michael A.
APPLICANT: O'Donnell, Michael A.
APPLICANT: DeWolf, William C.
APPLICANT: Aldovini, Anna
APPLICANT: Aldovini, Anna
APPLICANT: Aldovini, Anna
APPLICANT: Achard A.
TITLE OF INVENTION: RECOMBINANT BCG VACCINES
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
CITY: Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/06/460,981
FILIG DATE: 05-JUN-1995
   PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:

FILING DATE: 07-JUL-1989
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/361,944
FILING DATE: 05-JUN-1989
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/223,089
FILING DATE: 22-JUL-1988
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/216,390
FILING DATE: 07-JUL-1988
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/216,390
FILING DATE: 07-JUL-1988
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/163,546
FILING DATE: 03-MAR-1988
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/020,451
FILING DATE: 29-FEB-1988
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/020,451
FILING DATE: 02-MAR-1987
ATTORNEY/AGENT INFORMATION:

NAME: Grandan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: 32,227
REFERENCE/OCKET NUMBER: 32,227
RESERRANCE/OCKET NUMBER: 32,227
REPREPAR: 6617) 861-6540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-460-981-4
; Sequence 4, Application US/08460981
; Patent No. 5830475
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , MOLECULE TYPE: DNA (genomic) US-08-461-725-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 02173-4799
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Lexi
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 14.4; DB 1; Length 39;
Pred. No. 4.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: Two Militia Drive CITY: Lexington SATE: MA CONNWILL MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTEY US

ZIP: 0213-4799

ZIP: 0213-4799

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,725
FLING DATE: 05-JUN-1995
FLING APPLICATION DATA:
APPLICATION NUMBER: US 08/096,027
FILING DATE: 22-JUL-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/711,334
FILING DATE: 06-JUN-1991
PRIOR APPLICATION NUMBER: US 07/711,334
FILING DATE: 19-JUN-1999
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/367,894
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/367,894
FILING DATE: 19-JUN-1999
PRIOR APPLICATION NUMBER: US 07/367,894
FILING DATE: 18-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: O'Donnell, Michael A.
APPLICANT: Duda, Woesmary B.
APPLICANT: DeWolf, William C.
APPLICANT: Aldovini, Anna
APPLICANT: Aldovini, Anna
APPLICANT: Young, Richard A.
ITILE OF INVENTION: RECOMBINANT BCG VACCINES
NUMBER OF SEQUENCES: 9
CORRESSED FONDERS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Mismatches
APPLICATION NUMBER: US 07/163,546
FILING DATE: 03-MAR-1988
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: PCT/US88/00614
FILING DATE: 29-FEB-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/020,451
FILING DATE: 02-MAR-1987
ATTONEN/AGENT INFORMATION:
NAME: Granahan, Particia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: 32,227
REPERENCE/DOCKET NUMBER: 32,227
REPERENCE/DOCKET NUMBER: 32,227
REPERENCE/DOCKET NUMBER: 31,227
REPERENCE/DOCKET NUMBER: 32,227
REPERENCE/DOCKET NUMBER: 31,227
RELECHONEL (617) 861-6540
INFORMATION FOR SEG ID NO: 4:
SEGUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/08461725
Patent No. 5776465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGCATGGCCAAGGGATCC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ) TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-096-027-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 72.0%;
Local Similarity 77.8%;
nes 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 39 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-461-725-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
```

ò 셤

```
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Davier, David A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seatlle
STREET: Washington
COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                      STATE: CULLY
COMPUTRY: USA
2IP: 4414-2688
2IP: 44114-2688
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTRY: IBM PC COMPATIBLE
COMPUTRY: PACENTY PC-DOS/MS-DOS
SOFTWARE: PACENTIN RELEASE #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/073,492
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DOCHACTLY, Pamela A.
REFERENCE/DOCKET NUMBER: 23114/04000
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECHOME: (216) 241-0816
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
TEMPORMATICS:
TEMPORMATICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 13.8; DB 3;
Pred. No. 8.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 41, Application US/08741881 Patent No. 5789245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26 crcecardecraadea 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 64.7%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 30-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CDNA HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                        Cleveland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ANTI-SENSE: NO
US-09-073-492-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Banerjee, Amiya K.
APPLICANT: Hoffman, Michael A.
TITLE OF INVENTION: Infectious Clone for Human Parainfluenza TITLE OF INVENTION: Virus Type 3
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Calfee, Halter & Griswold LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 72.0%; Score 14.4; DB 2; Best Local Similarity 77.8%; Pred. No. 4.4e+02; Matches 14; Conservative 2; Mismatches 2;
CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/096,027
FILING DATE: 2-JUL-1993
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/711,334
FILING DATE: 06-JUM-1991
FILING DATE: 06-JUM-1991
FILING DATE: 19-JUM-1989
FILING DATE: 2-JUM-1989
FILING DATE: 2-JUM-1989
FILING DATE: 2-JUM-1989
FILING DATE: 07-JUM-1989
FILING DATE: 07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-073-492-5/c
; Sequence 5, Application US/09073492
; Patent No. 6248578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 800 Superior Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-460-981-4
```

셤

```
STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 41, Application US/08739158
Patent No. 5814482
GENERAL INFORMATION:
APPLICANT: Dolbonsky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Dolly, Douglass J.
APPLICANT: John M.
APPLICANT: John M.
APPLICANT: John M.
APPLICANT: John M.
APPLICANT: Driver, David A.
TITLE OF INVENTION: EUKREYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                      Query Match 69.0%; Score 13.8; DB 1; Length 48; Best Local Similarity 64.7%; Pred. No. 9.1e+02; Matches 11; Conservative 5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 13.8; DB 1; Length 48;
Pred. No. 9.1e+02;
5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STAIL:
COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/739,158
TING DATE: 30-OCT-1996
TING DATE: 30-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 30-OCT-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: MCAMBSTERE, David D:
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049,423D3 / 1146.012
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 41:
REFERENCE/DOCKET NUMBER: 930049.423C6 / 1146.007 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                          29 CTCGGATGGCTAAGGGA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29 CTCGGATGCCTAAGGGA 13
                                     TELEPANE: (206) 622-4900
TELEPAX: (206) 682-6031
INPORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 48 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69.0%;
Best Local Similarity 64.7%;
Matches 11; Conservative 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 48 base pairs
TYPE: nucleic acid
                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
US-08-739-158-41/c
                                                                                                                                                                                                      ; TOPOLOGY:
US-08-741-881-41
                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

RESULT :

```
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Date: Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Joily, Douglas J.
APPLICANT: Joily, Douglas J.
APPLICANT: Bell, Barbara A.
APPLICANT: Bell, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS AND ALPHAVIRUS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Callos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: DIVERTION: BURARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69.0%; Score 13.8; DB 2; Length 48; 64.7%; Pred. No. 9.1e+02; tive 5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZUMPATI: 0.2
ZURP 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILING DATE: 30-OCT-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               930049.423C7 / 1146.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                        E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 41, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION:
Sequence 41, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: MCMASters, David D.
REGIGSTRATION UNDRER: 33,963
REFERENCE/DOCKET 33,963
TELEFRAION NUMBER: 9300
TELEFROMUNICATION INFORMATION:
TELEFROM (206) 682-6910
TELEFRAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 48 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 64.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                           CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-404-796-41/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY:
US-08-739-167-41
```

```
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Seattle
STATE: Washington
TELEFAX: (206) 682-603:
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 48 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 64.7
Matches 11, Conservative
                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
                                                                                                                                 ; TOPOLOGY: linear
US-08-931-869-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-09-236-140A-41/c
                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-350-399-41/C
                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11, Application US/08931869
Fatent No. 6015694
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Danez, Carlos E.
APPLICANT: Danez, Carlos E.
APPLICANT: Driver, David A.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69.0%; Score 13.8; DB 3; Length 48; 64.7%; Pred. No. 9.1e+02; Live 5; Mismatches 1; Indels
                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:

NAME: McMasters, David D.

REGISTRATION UNBER: 33,963

REFERENCE DOCKET UNMBER: 93049.423C5 / 1146.006

TELECOMMUNICATION INFORMATION:

TELEPHONE: (206) 622-490

TELEPRAM: (206) 622-490

TELEPRAM: (206) 622-631

INFORMATION FOR SEQ ID NO: 41:

SEQUENCE CHARACTERISTICS:

LENGTH: 48 base pairs

LENGTH: 48 base pairs

TYPE: nucleic acid

STRANDEDNESS: single
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OMPUTER: IBM PC compatible
OMPUTER: PATEMING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATEMIN RC-BOS/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 1-MAR-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/404,796
APPLICATION NUMBER: US 08/404,796
FILING DATE: 15-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: MCMGREGER, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 33,9049.423C5 / 1146.006
TELECPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBW FC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION NAMBER: US/08/931,869
FILING DATE: 16-SEP-1997
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29 CTCGGATGGCTAAGGGA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 64.7'
Matches 11, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TOPOLOGY: linear
US-08-404-796-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-931-869-41/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                               Sequence 41, Application US/09350399
Sequence 41, Application US/09350399
Patent No. 6342372
GENERAL INFORMATION:
GENERAL INFORMATION:
Polo, John M.
Jolly, Douglas J.
Driver, David A.

TITLE OF INVENTION: EUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: MCMABLERB, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 930049,423D1 / 1146.010
                                      Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 69.0%; Score 13.8; DB 3; Best Local Similarity 64.7%; Pred. No. 9.1e+02; Matches 11; Conservative 5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69.0%; Score 13.8; DB 3;
64.7%; Pred. No. 9.1e+02;
ive 5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY: linear ; SEQUENCE DESCRIPTION: SEQ ID NO: 41: US-09-350-399-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 41, Application US/09236140A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 48 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                           1 BKSGCAUGGCUAAGGGA 17
                                                                                                              29 CTCGGATGGCTAAGGGA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (206) 682-6 INFORMATION FOR SEQ ID NO: 41:
```

```
US-08-739-158-79/c
US-08-739-158-79/c
Sequence 79, Application US/08739158
Patent No. 5814482
Patent No. 5814882
Papelicant Dubensky Jr, Thomas W
APPLICANT: Polly, John M.
APPLICANT: Daiver, David A.
TITLE OF INVENTION: EUKARVOTIC LAYERED VECTOR INITIATION SYSTEMS
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 13.8; DB 1; Length 56; Pred. No. 9.2e+02; 5; Mismatches 1; Indels
                    COMPUTER ACADOMS SOURCE AND ASSET OF THE PROPERTY OF SOURCE AND ASSET OF SOURCE CHARACTERISTICS:

LENGURALION FOR SEQ ID NO: 79:

SEQUENCE CHARACTERISTICS:

LENGURAL SE DASSE DAIRS

TOTAL SOURCE ASSET OF SO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: Seattle
STATE: Washington
COUNTRY: Washington
COUNTRY: US
ZIP: 98104-7092
ZORPHUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
SURRENT APPLICATION NUMBER: US/08/739,158
FILING DATE: 30-OCT-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 930049,423D3 / 1146.012
TELECOMMUNICATION NUMBER: 930049,423D3 / 1146.012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              930049.423D3 / 1146.012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69.0%; Sco...
64.7%; Pred
5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37 CTCGGATGGCTAAGGGA 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 79:
SEQUENCE CHARACTERISTICS:
LENGTH: 56 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 64.7%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-741-881-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 79, Application US/08741881

Sequence 79, Application WAPPLICANT: Dubensky Jr, Thomas WAPPLICANT: Dubensky Jr, Thomas WAPPLICANT: Dalo, Stephen M.W. APPLICANT: Dologlas J. APPLICANT: Dolly, Douglas J. APPLICANT: Belli, Barbara A. TITLE OF INVENTION: BUKARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128

CORRESPONDENCE ADDRESS:

ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 69.0%; Score 13.8; DB 3; Length 48; Best Local Similarity 64.7%; Pred. No. 9.1e+02; Matches 11; Conservative 5; Mismatches 1; Indels
                                                                                                        Polo, John M.
Ibanez, Carlos E.
Chang, Stephen M.W.
Jolly, Douglas J.
Driver, David A.
Belli, Barbara A.
TITLE OF INVENTION: RECOMBINANT ALPHAVIRUS PARTICLES
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Cullman, Louis C.
REGISTRATION UNMBER: 39,645
REFERENCE/DOCKET NUMBER: 20263.332 / 1146.020
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: OPPENHEIMER WOLFF & DONNELLY
STREET: 840 NEWPORT CENTER DRIVE, SUITE 700
CITY: NEWPORT BEACH
STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION UNMERS: US/09/236,140A
FILING DATE: 22-Jan-1999
CLASSIFICATION: <UNKnown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE DESCRIPTION: SEQ ID NO: 41: US-09-236-140A-41
Patent No. 6376236
GENERAL INFORMATION:
APPLICANT: Dubensky Jr., Thomas W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (949) 823.6000
TELEFAX: (949) 823.6100
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 48 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29 CTCGGATGGCTAAGGGA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         roPoLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
US-08-741-881-79/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: W
COUNTRY:
```

ઠે g

ö

Gaps

us-09-699-667e-66.siz.rn1

```
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
TITLE CAN T. Belli, Barbara A.
TITLE OF INVENTION: BURARYOTIC LAYERED VECTOR INITIATION SYSTEMS NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                STATE: WEBLINGLOW:
COUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: BA PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,796
FILING DATE: 1.5-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAWE: MCMAStere; David D.
REGISTRATION NUMBER: 930049.423C5 / 1146.006
TELECOMMUNICATION INFORMATION:
TELEPAX: (206) 622-6900
TELEFAX: (206) 682-6931
INFORMATION FOR SEQ ID NO: 79:
SEQUENCE CHARACTERISTICS:
LENGTH: 56 base pairs
                                                                                                                                                                                                                                                 E: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69.0%; Score 13.8; DB 3;
64.7%; Pred. No. 9.2e+02;
tive 5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search completed: March 15, 2005, 20:44:24 Job time : 33.2456 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37 CTCGGATGGCTAAGGGA 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 64.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                  CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
TOPOLOGY:
US-08-404-796-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Dane, John M.
APPLICANT: Dane, Carlos E.
APPLICANT: Chang, Stephen M.W.
APPLICANT: Jolly, Douglas J.
APPLICANT: Driver, David A.
APPLICANT: Belli, Barbara A.
APPLICANT: Bill, Barbara A.
APPLICANT: Bill Barbara A.
APPLICANT: Bill, Bar
                                                                                                                                                   ö
                                                                                                                                                   Gaps
                                                                                                                                                   .
0
                                                                               Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69.0%; Score 13.8; DB 2; Length 56; 64.7%; Pred. No. 9.2e+02;
                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/739,167
FILLNG DATE: 30-OCT-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      930049.423C7 / 1146.008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTY: US
ZIP: 0011
                                                                           69.0%; Score 13.8; DB 1; 64.7%; Pred. No. 9.2e+02;
                                                                                                                                                5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 79, Application US/08404796
Patent No. 6015686
GENERAL INFORMATION:
APPLICANT: Dubensky Jr, Thomas W
APPLICANT: Polo, John M.
APPLICANT: Ibanez, Carlos E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 79, Application US/08739167
Patent No. 5843723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: McMasters, David D.
REGISTRATION NUMBER: 33,963
REFERENCE/DOCKET NUMBER: 9300
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                    1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                            37 CTCGGATGGCTAAGGGA 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37 CTCGGATGGCTAAGGGA 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 79:
                                                         Query Match
Best Local Similarity 64.74
Warches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 64.7
Matches 11, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 56 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
US-08-404-796-79/c
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-08-739-167-79/c
          US-08-739-158-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

ö

Gaps

THIS PAGE BLANK (USPTO)

OM nucleic

Run on:

Sequence:

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 44 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers

1. 57

/ organism="synthetic construct"
//mol.type="unassigned RNA"
//db_xref="taxon:3260"
AC094325 Rattus no AC11858 Rattus no AC055230 Rattus no AC055416 Rattus no AC059416 Rattus no AC059416 Rattus no CQ73286 Sequence AF422508 Aconaute AR42250 Tachornis AR070467 Sequence 10793 Sequence 10793 Sequence 10793 Sequence 10793 Sequence AR390800 Sequence AR390800 Sequence AR390800 Sequence AR390800 Human DNA AL05509 Human DNA AL05509 Human DNA AL15292 Human DNA AL162592 Human DNA AL162692 Human DNA AL162692 HUMAN AL162692 
                                                                                                                                                                                                                                                                                                                                     AC115040 Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 57
                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 92.0%; Score 18.4; DB 6; Best Local Similarity 75.0%; Pred. No. 44; Matches 15; Conservative 5; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 45 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012282
Sequence 44 from Patent WO9955856.
                                                                                                                                                                                                                AF378903
HS77019
AL354751
AC114447
AL138834
                                                                                           AF492508
AF492513
                                                                                                                                                                                                                                                                                  AC087119
AL390203
                                                                                                                                                                                                                                                                                                           AL162592
AC027278
                                         AC121743
                                                                                                                                                             AR390800
                                                                                                                                                                           AR474619
                                                                                                                                                                                                     AX959240
                                                                                                                                                                                       HUMPRCA
                                                                                                                                                  107993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trecarectares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX012282
AX012282.1 GI:9998343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
                           2553409
255367
255219
2755219
11158
11188
11725
11725
11725
11725
11725
                                                                                                                                                                                                                                                        110000
                                                                                                                                                                                                                                            104228
  38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                AX012282
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                         00000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC132314 Mus muscu
AC094522 Rattus no
M32142 X.campestri
AE012317 Xanthomon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C118386 Rattus no
C098616 Homo sapi
AC121858 Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ношо варі
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                           March 15, 2005, 06:19:02 ; Search time 392.807 Seconds (without alignments) 2467.126 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX012282 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX012283
AX012284
AX012286
AX012286
AX012286
AX012289
AX012290
AX012290
AX012290
AX012290
AX012290
AX012290
AX012290
AX012290
                                                                                                                                                                                                                                                                      9416466
             GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                          4708233 segs, 24227607955 residues
                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX012286
AX012287
AX012289
AX012290
AX012290
AX012292
AC118386
AC18386
AC128386
AC128386
AC128386
AC128386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC132314
AC094522
XANAVR
AE012317
                                                                                                                                                                         1 bksgcauggcuaagggaccc 20
                                                                                                                                                                                                  IDENTITY NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                                                            US-09-699-667E-66
                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              156356
251908
2100
10992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_8t8:*
gb_un:*
gb_vi:*
                                                                                                                                                                                                                                                                                                                                                                                                      gb htg: *
gbb ntg: *
gbb ov : *
gbb ov : *
gb ph : *
gb pr : *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     195568
144393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177226
                              Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236694
                                                                                                                                                                                                                                                                                                                                                                                           GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.2.0
9.2.0
9.2.0
9.2.0
9.2.0
9.2.0
9.2.0
9.3.0
9.3.0
9.3.0
9.3.0
                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
```

Minimum DB Maximum DB

Database

Searched:

PAT 06-SEP-2000

ö

Gaps

ö

PAT 06-SEP-2000

synthetic construct synthetic construct

Result

ORIGIN

ò 셤

```
ö
                                                                                                                                                                                                                                                                                                                                           PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 48 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 49 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                Gaps
                                                                                                                                                                                ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
                                                                                                                                           DB 6; Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 92.0%; Score 18.4; DB 6; Length 57; Best Local Similarity 75.0%; Pred. No. 44; Matches 15; Conservative 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                ö
                1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. 57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic construct other sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    other sequences; artificial sequences.
                                                                                                                                           92.0%; Score 18.4; I
75.0%; Pred. No. 44;
ive 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 49 from Patent W09955856. AX012287
                                                                                                                                                                                                                                                                                                                                                      Sequence 48 from Patent W09955856.
AX012286
Location/Qualifiers
                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                    38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                           AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
                                                                                                                                                              Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                              AX012286
                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                       RESULT 5
AX012286
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
AX012287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPERENCE
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 995586-A 45 04-NOV-1999;

ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Batent: WO 995586-A 46 04.NOV-1999;

ANANVORANICH STRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Batent: WO 9955856-A 47 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                           ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                        Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
92.0%; Score 18.4; DB 6;
Best Local Similarity 75.0%; Pred. No. 44;
Matches 15; Conservative 5; Mismatches 0;
                                                                                                                                                                                                                                                                      92.0%; Score 18.4; DB 6; 75.0%; Pred. No. 44; cive 5; Mismatches 0;
                                                                                                                                           1..57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
 other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57 bp
Sequence 47 from Patent WO9955856.
AX012285
AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 46 from Patent WO9955856.
                                                                                                                                                                                                                                                                                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                 38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38 CGGCATGCTAAGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
JOURNAL
                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
AX012284
                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
```

ORIGIN

ð ద

```
PAT 06-SEP-2000
                                                                                                                                                                                                                                       Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955856-A 52 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS AC118386 236694 bp DNA linear HTG 15-NOV-2002 DEFINITION Rattus norvegicus clone CH230-397N16, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 54 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.0%; Score 18.4; DB 6; Length 57; 75.0%; Pred. No. 44; ive 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 18;
                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match

88.0%; Score 17.6; DB 6;
Best Local Similarity 83.3%; Pred. No. 1.4e+02;
Matches 15; Conservative 3; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1..18
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db xref="taxon:3260"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                              /organism="synthetic construct"
/mol type="unassigned RNA"
/db xref="taxon:32630"
/nofe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    other sequences; artificial sequences.
                                                                                                                                                                                       synthetic construct other sequences; artificial sequences
                                                                                Sequence 52 from Patent WO9955856.
AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 54 from Patent WO9955856.
AX012292
38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                    AX012290.1 GI:9998351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX012292.1 GI:9998353
                                                                                                                                                                       synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
                                                                                                  DEFINITION
                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
AX012292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
AC118386
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                RESULT 9
AX012290
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                         PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                            Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Nucleic acid enzyme for rna cleavage
Parent: WO 995586-A 51 04-NOV-1999;
ANANVORANICH SIRINARY (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 92.0%; Score 18.4; DB 6; Length 57; Best Local Similarity 75.0%; Pred. No. 44; Matches 15; Conservative 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 57;
                                                                                                                                                                                                         linear
                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                Length
                DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon:32630"
/nole="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="texon.32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                         RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.0%; Score 18.4; DB 75.0%; Pred. No. 44; iive 5; Mismatches
                                                                                                                                                                                                                                                                                                                            other sequences; artificial sequences
              Score 18.4; DE; Pred. No. 44; 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 51 from Patent W09955856.
                                                                                                                                                                                                     AX012288 57 bp
Seguence 50 from Patent WO9955856.
AX012288
                                                                                1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                      38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38 TTCGCATGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                       AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX012289.1 GI:9998350
              92.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
              Query Match
Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                   RESULT 7
AX012288
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bource
                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
AX012289
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
```

ઠે 셤

```
On Nov 15, 2002 this sequence version replaced gi:23812823. The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs cordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence cantigs with a consist entirely of whole senome shotgun sequence cantigs will be indicated in the feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * NOTE: Estimated insert size may differ from sequence length

* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft_data.html).

* NOTE: This is a "working draft' sequence. It currently

* consists of 3 contigs. The true order of the pieces

* is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 17.2; DB 2; Length 236694; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 217900: contig of 217900 bp in length
1901 218000: gap of unknown length
1001 234916: contig of 16816 bp in length
1917 234916: gap of unknown length
1917 236594: contig of 1778 bp in length
10021contig of 1778 bp in length
10021contig of 1778 bp in length
10021contig of 1778 bp in length
10021contigue or contigue 10021contigue 10021c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----- Genome Center
Center: Baylor College of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .210237)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   216516..217900
/note="wgs_end_extension
clone_end:Sp6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="wgs_end_extension
lone_end:Sp6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA'
/db_xref="taxon:10116"
/clone="CH230-397N16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    end sequence:BZ179483"
210891. .213141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="clone_boundary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GUEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .1087
/note="wgs_contig"
2310. .3895
/note="wgs_contig"
103725. .105993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="wgs_contig"
complement (209467.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="wgs_contig"
120992. .122993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center project name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218001
234817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  234917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           217901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      table.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                  Natary, Danales 1 to 216594

Natary, Marale, Walezker, M. Lee., Abramazon, S., Addms, C., Alder, J., Allen, C., Allen, H., Alabrocoke, S., Amin, A., Angulano, D., Anyalabechi, V., Aoyogi, A., Ayodeji, M., Baca, E., Baden, H., Balden, C., Bendaranake, D., Banbarde, B., Baranteed, M., Benahmed, F., Biswalo, K., Balati, J., Blankenburg, K., Biyth, P., Brown, M., Balden, H., Bayart, M., Bhay, C., Burch, P., Burch, M., Calderon, E., Corkeall, J., Chen, S., Chen, R., Calderon, E., Corkeall, R., Chen, C., Coyle, C., Coyle, M., Cree, A., D'Susa, L., Davila, M., Cree, M., Distan, L., Davis, C., Dargen, C., Ding, Y., Dinh, H., Duya, K., Davila, M., Cree, M., Distan, L., Davis, C., Darger, C., Ding, Y., Dinh, H., Duya, R., Chen, C., Coyle, D., Danalon, S., Deramo, C., Ding, Y., Dinh, H., Duya, R., Chen, C., Coyle, C., Ding, Y., Dinh, J., Davis, M., Cabisi, A., Gante, R., Cara, M., Gabrisi, A., Gante, R., Garcia, M., Gabrisi, A., Gante, R., Garcia, M., Gabrisi, A., Gante, R., Hang, M., Handin, C., Hamilton, K., Harandez, S., Filly, M., Fladin, S., Hund, J., Johnson, B., Oblinson, M., Handin, C., Hamilton, K., Harandez, S., Filly, S., Huly, S., Hund, J., Johnson, R., Oblinson, R., Johnson, R., Margan, R., Karat, C., L., Lebow, H., Lewis, L., Li, X., Ma, J., Mandin, M., Mahlin, S., Kelly, S., Kelly, S., Kelly, S., Kelly, S., Kally, S., Mancol, J., Lewis, L., Li, Y., Liu, W., Marcia, M., Mancol, J., London, P., Mancol, M., Mandow, M., Marcia, M., Mandow, M., Man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (17-APR-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 236694)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (15-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
                                                                                                                                                                                                                                                   Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                       DRAFT, HTGS ENRICHED.
                                                                                       AC118386.4 GI:25013229
HTG; HTGS_PHASE1; HTGS_DRAFT; Rattus norvegicus (Norway rat)
               ***, 3 unordered pieces.
AC118386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 236694)
                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 236694)
                                                                                                                                                                                                                   Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jnpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Worley, K.C.
                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                           ACCESSION
                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                           SOURCE
```

ò 셤

```
PRI 21-MAR-2002
  ö
                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 159629)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence Quality Assessment:
This entry has been annotated with sequence quality
estimates computed by the Phrap assembly program.
All manually edited bases have been reduced to quality zero.
Quality levels above 40 are expected to have less than
1 error in 10,000 bp.
Base-by-base quality values are not generally visible from the
GenBank flat file format but are available as part
of this entry's ASN.1 file.
                                                                                                                                                                                     AC098616 159629 bp DNA linear PRI 21-MAR-
Homo sapiens chromosome 3 clone RP11-279118, complete sequence.
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                             Kaul, R.K., Olson, M.V., Zhou, Y., James, R.A., Rouse, G., Wu, Z., Saenphimmachak, C., Phelps, K.A., Raymond, C. and Haugen, B.D. Direct Submission
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Quality coverage: 8.0x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequencing vector: plasmid; 100% of reads Sequencing vector: plasmid; 100% of reads Chemistry: Dye-terminator ET; 32% of reads Chemistry: Dye-terminator Big Dye; 68% of reads Assembly program: Phrap; version 0.990319 Consensus quality: 159%0 bases at least Q40 Consensus quality: 159619 bases at least Q30 Consensus quality: 159629 bases at least Q20 Insert size: 171821; sum-of-contigs
1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kaul, R.K., Olson, M.V., Raymond, C. and Haugen, E.D. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5: Mapping in progress
3: RP11-301D8 (UWGC:bc0350) AC093142
Mismatches
                                                               190086 CTTGCATGGCTAAGGGACCC 190105
                                       1 BKSGCAUGGCUAAGGGACCC 20
  4.
                                                                                                                                                                                                                             AC098616
AC098616.2 GI:19570159
HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 159629)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Overlapping Sequences:
                                                                                                                                                                                                                                                                                              Homo sapiens (human)
Conservative
                                                                                                                                                                                                                                                                                                                    domo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
15;
                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                   LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                              RESULT 12
AC098616/c
                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
```

covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. Sequence Validation: This sequence has been validated by Multiple Complete Digest

	r.Ma	8857	) i	- 1	785 810	-	ı mi	90		414	65	63.	113	:	988	61	280	474	333		109	من ا	218	16 <800	104	154	347	3347 3362
consists or cent the ent off (approxi and hence do tr remaining d values. U	rPrnt SegDe	3826		2091	5425	i		3543	i	•	1	1		1901		;	2091						:	1306		:	: :	į
ested sequence curately representable cu a fingerprint e no signific al and predic by dashed l	eqDerMap Fng	3841	1 1	9 -	5288	29	87	3465	70	163	74	1	287	וסו	592	347	2130	28	177	~	861	22	299	-	292	S	Ë	3901
order to a ments below solved in t le. There a e experimen are separat	FngrPrntS	- 5003	3	6535	<800	<800	2853	1610	3877	1890	. 01711	1729	7249	- 008>	1218	2347	1300	1396	2173	<800	<800	9448	3589	- 008>	2520	- 008>	11187	- 008>
Small I are not in the between fragmen	SeqDerMap	0.501		6382	512		28		39	19		17	723	72	123	7		-	7		12	95	362		24	1	1108	86

AC121858 177226 bp DNA linear	lus BAC clone RP24-104B23 from chromosome 8	ACCESSION AC121858 VERSION AC121858 3 GI:23499652	S HTG.	NISM	Mam	SSE	Unp	SS		S S	JUILE DIFECT SUBMILESSION JOURNAL Submitted (21-MAY-2002) Genome Sequencing Center, 4444 Forest Park	REFERENCE 4 (AD 17725) NO 03100, USA REFERENCE 4 (AD 17725) NO 17725 NO PARTENCE MADAGER 1 D and Waterston B H		יייי דיייי	McPherson, J.	JITLE Direct SubmitsBlon JOURNAL Submitted (04-OCT-2002) Genome Sequencing Center, 4444 Forest Park	1 to 177226)	Wilson, K. Direct Submission	2	COMMENT On Oct 4, 2002 this sequence version repraced gr:z/30320.	Center code: WUGSC	web site: http://genome.whstl.edu Contact: submissions@watson.wustl.edu	Center project name: M_BB0104B23		NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping	clone sections once, or longer because we provide a small overlap between neighboring data submissions.	This semience was finished as follows unless otherwise noted:	all regions were double stranded, sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >=	30); an attempt was made to resolve all sequencing problems, such as compressions and receats; all regions were covered by sequence	from more than one subclone; and the assembly was confirmed by restriction digest.	MAPPING INFORMATION: Mapping information for this clone was provided by Dr. Wes Warren,	Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://denome.wustl.edu	
1087	3650	1396	2396	2396	8857	3003	4435	1173	<800	810	9546	5773	1724	1999	810	<800	3362	5618	5142	10484	1087	<800	2214	7043								Gaps 0;	
1045	3651	1450	2358	2389	8825	2954	4464	1190	611	765	6996	5753	1762	2026	826	343	3435	5567	5145	10687	1097	09	2196	0969	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						Length 159629;	Indels 0; 0	
862	2313	6162	7521	<800	8073	2797	<800	23157	<800	2425	1001	1001	1462	968	6404	12263	<800	<800	<800	6404	4643	<800	4241	<800	<800	1306		) ) ,				e+02;	
864	2290	6185	7559	424	8172	2726	18	22869	989	2370	1085	1136	1491	096	6374	12812	627	703	10	6474	4615	44	4175	587	262	1221	376	1,61,040	omo saniens"	/mol_type="genomic DNA" /db_xref="taxon:9606" /chronecome="3"	Score 16.8;	Pred. No. 1.9e+02; 5; Mismatches 1;	C 20
4348	1890	4348	829	1890	1890	<b>800</b>	3877	10032	6535	2067	1300	2067	6535	<800	2347	7667	<800	1218	10032	1218	1110	<800	9163	686	3589				.159629 .159629	type="g xref="ta	84.0%;	% 0	IAAGGGACC
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1850	4311	820	1867	1906	251	3901	10157	1699	2067	1336	2048	6447	617	2372	7631	157	1233	9892	1229	1106	140	9036	994	3530	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			rce	(	•	Best Local Similarity 70. Matches 14; Conservative	Qy 1 BKSGCAUGGCUAAGGGACCC 20

1 BKSGCAUGGCUAAGGGACCC 20 :::|||:|||:|||||| 98089 CTGGCATGGCTAAGGGACAC 98070

qq ઠે

Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu SOURCE INFORMATION:
The RECI-24 BAC Library has been constructed by Pieter de Jong and coworkers (http://www.chori.org) from male C57BL/6J mouse spleen and/or brain genomic DNA. The clone and detailed information can be rpt\_family="MaLR" 7262. .2700^

```
repeat_region
                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
AC092503/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
obtained from Pieter de Jong and coworkers at http://www.chori.org
                        NEIGHBORING SEQUENCE INFORMATION:
This sequence is the entire insert of the clone. This clone is
overlapped by AL590988.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23909. .24044
/rpt family="Alu"
24526. .24572
/rpt family="MER1_type"
24573. .24987
                                                                                           organism="Mus musculus"
mol type="genomic DNA"
db_xref="taxon:10090"
chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt.family="WER1_type"
26578. .26827
/rpt_family="MalR"
26803. .26871
                                                                                                                                                              /clone="RP24-104B23"
/clone_llb="RPCI-24"
754._il57
/rpt_family="MaLR"
1546._l626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family="AcHobo"
                                                                                                                                                                                                                                                                                                                                            rpt family="MIR"
1697. 4978
frpt family="B4"
5676. 6105
rpt family="Walk"
7789. 7900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7082. .9440
rpt family="MaLR"
1659. .11984
rpt family="MaLR"
2635. .12744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt family="L2"
19800. 19877
"rpt family="L2"
9943. 20343
rpt family="WalR"
1571. 21702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tot family="RMER3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="MaLR"
5787. 15891
rpt_family="Alu"
7923. 18140
                                                                                                                                                                                                                   1546. .1626
/rpt_family="ID"
/rpt_family="ID"
/rpt_family="Alu"
1954. .2098
/rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="Alu"
1882. .9025
rpt_family="Alu"
1882. .9440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family="AcHobo
2789. .12921
rpt_family="Alu"
:4015. .14259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt family="MaLR" 4988, 25ch?
                                                                                                                                                                                                                                                                                                      )23. .4272
cpt_family="ERV1"
518. .4562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="MaLR"
1588. .1970.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tpt_family="Alu"
3766. 19107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .21702
family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpt_family="B2"
3341. .18483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .15444
                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                   FEATURES
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 177226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 84.0%; Score 16.8; DB 10; Best Local Similarity 70.0%; Pred. No. 1.9e+02; Matches 14; Conservative 5; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44326...44765

/rpt_family="ERVK"

4726...4735

/rpt_family="RMER13B"

47120...47235

/rpt_family="Alu"

49366...49516

/rpt_family="MER2_type"

50055...50151

/rpt_family="MIR"

50385...50502

/rpt_family="MIR"

50385...50502

/rpt_family="MIR"

51930...52035
/rpc_family="RMERGA"
29530. 29733
/rpc_family="MERI_type"
30241. 30369
/rpc_family="Alu"
31099. 31330
/rpc_family="B2"
32833. 32920
/rpc_family="B4"
3516. 35498
/rpc_family="B4"
3516. 35498
                                                                                                                                                                                                                                                                 . 10860. 40908
/rpt_family="MalR"
40909. 41308
/rpt_family="MalR"
41309. 4140A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150188 GGGCATGGCTCAGGGACCC 150169
                                                                                                                                                                                                                                                                                                                                    |1309. 41484
| 1209. 41484
| 1486. 41719="Malk"
| 12071. 42402
| 12071. 42402
| 12071. 42907
| 12080. 42907
| 13080. 4389
| 13080. 4388
| 13080. 4388
| 13080. 4388
| 13080. 4388
| 13080. 4389
| 13080. 4388
| 13080. 4388
| 13080. 4388
| 13080. 4388
| 13080. 4388
| 13080. 4388
| 13080. 4388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="L2"
52874. .52980
/rpt_family="ERVL"
53162. .53379
                                                                                                                                                                                                                                 /rpt_family="L2"
40727. 40851
/rpt_family="L1"
40860. 40908
                                                                                                                                                                          rpt family="Alu"
9168. .39297
                                                                                                                                                                                                      rpt_family="B4"
9534. .39735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 BKSGCAUGGCUAAGGGACCC 20
                                              repeat_region
                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                          repeat_region
                                                                                                       repeat_region
                                                                                                                                  repeat_region
                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
```

ORGANISM

REFERENCE AUTHORS TITLE JOURNAL REFERENCE

AUTHORS

TITLE JOURNAL REFERENCE AUTHORS TITLE JOURNAL

COMMENT

	Small fra
Include Bagilenia	in the ta
Primates;	between t
:	fragments
Kaul, R.K., Olson, M.V., Zhou, Y., James, R.A., Rouse, G., Wu, Z.,	168 1
Saenpolmmacnak, C., Phelps, K.A., Kaymona, C. and haugen, E.D. Direct Submission	SegDerMap
Unpublished	
Kaul, R.K., Olson, M.V., Raymond, C., Clendenning, J., Ivey, R.G. and	00001
Haugen, E.L.D.	F 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Direct summitserou. Submitted (12-III. 2001) Genome Center University of Washington.	2067
To foreign	
3 (bases 1 to 195568)	1069
Kaul, R.K., Olson, M.V., Zhou, Y., James, R.A., Rouse, G., Wu, Z.,	1 ( 1 ( 1 ( 1 ( 1 ( 1 ( 1 ( 1 ( 1 ( 1 (
Saenphimmachak, C., Phelps, K.A., Raymond, C. and Haugen, E.D.	2012
Direct Submission Conter Thiversity of Washington Courts (Thiversity of Washington	864
Substitution (23-february) demonstrate of massacratic of massacrat	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
On Feb 23, 2002 this sequence version replaced gi:14702057.	2290
Genome Center	
Center: University of Maghington Genome Center	9879
Tenter Lode: Under Comme washington edu	7549
Contact: uwgchtgs@u washington.edu	
Drafting Center: WUGSC	424
Project Information	1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	8172
Center clone name: RP11-539L2 (bc0468)	3000
Commonstate to a second of the control of the contr	07/7
Sequencing vector: M13: 35% of reads	18
Sequencing vector: plasmid; L08752; 31% of reads	
Dye-terminator ET; 27% of rea	22874
ads	707
Chemistry: Dye-terminators Big Dye; 38% of reads	000
Abseling program: Tilaby versum 0.350313 Consensis mislity: 164464 bases at 1east 040	2370
quality: 195528 bases at least	
quality: 19	1085
Insert size: 198186; sum-of-contigs	
Quality coverage: 8.5x in Q20 bases; sum-of-contigs	977
Overlapping Sequences:	1489
5': RP11-284A4 (UWGC:bc0338) AC025081	
3': RP11-301D8 (UWGC:bc0350) AC093142	096
Commons Anality Secondary.	6372
Sequence guairly assessment: This entry has been annotated with sequence quality	
	12755
All manually edited bases have been reduced to quality zero.	709
Quality levels above 40 are expected to mave less than	
Base-by-base quality values are not generally visible from the	703
GenBank flat file format but are available as part	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
of this entry's ASN.1 file.	10
This sequence was finished as follows unless otherwise noted:	6470
all regions were either double-stranded or sequenced with an	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
alternate chemistry or covered by high quality data (i.e., Phred	4611
quality >= 30); an attempt was made to resolve all sequencing	
problems, buch as complessions and repeats; all regions were covered by at least one plasmid subclone or more than one M13	* 1
subclone; and the assembly was confirmed by restriction digest.	4181

This sequence has been validated by Multiple Complete Digest fingerprinting. Comparison of the experimentally derived digest fingerprinting with sequence-predicted fragments is given below. The electronically-digested sequence consists of both insert and vector, in order to accurately represent the entire circular BAC.

Sequence Validation:

fragments below a variable cutoff (approximately 400-800 bp) or resolved in the fingerprint and hence do not appear a table. There are no significant remaining discrepancies on the experimental and predicted values. Uniquely ordered mits are separated by dashed lines.

HindIII <800 <800 <800 <800 <800 <800 <800 SeqDerMap FngrPrnt <800 <800 <800 <800 SeqDerMap FngrPrnt <800 <800 ×800 <800 <800 <800 <800 <800 PngrPrnt 

	IIILE MUS MUSCUIUS CHIOMOSOME 18, CIONE KE24-143824 JOURNAL Unpublished	2 (bases 1 to 144393)	AUTHOKS Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B.,	<pre>Brown,A., Camarata,J., Campopiano,A., Chang,J., Chazaro,B., Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cook,A.,</pre>	<pre>Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S., Faro,S., Ferreira,P., FitzHugh,W., Gage,D., Galagan,J., Gardyna,S.,</pre>	<pre>Ginde,S., Gord,S., Goyette,M., Graham,L., Grand-Pierre,N., Haqos,B., Horton,L., Hulme,W., Iliev,I., Johnson,R., Jones,C.,</pre>	Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Leboczky, J., Levine, R., Liu, G., MacLean, C.	Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McRush D. McKerner Y. Moldrim J. Manche T. M., McRare T.	Mlenga,V., Murphy,T., Naylor,J., Nguyen,C., Nicol,R., Norbu,C.,	Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson. K Phunkhang. P Pierre, N Pollara, V Ravmond, C	Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J.,	Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N.,	Strauss, N., Subramanian, A., Talamas, J., Testaye, S., Theodore, J., Topham, K., Travers, M., Travis, N., Triqilio, J., Vassiliev, H.,	<pre>Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zainoun.J., Zembek.L., Zimmer.A. and Zody.M.</pre>	TITLE Direct Submission	JOURNAL Submitted (27-JAN-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA	REFERENCE 3 (bases 1 to 144393)	AUTHOKS BITTEN, B., NUBBAUM, C., LANGET, E., ADOUELLEII, A., ALLEN, N., Anderson, N., Arachchi, H.M., Barna, N., Bastien, V.,	Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y., Collymore, A., Cook, A., Choke, P., Corum, B.,	DeArellano, K., Diaz, J.S., Dodge, S., Dooley, K., Dorris, L.,	Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D.,	Galagan, J., Galayna, S., Glandan, L., Gland-Flerfe, N., Halez, N., Hagopian, D., Hagos, B., Hall, J., Horton, L., Hulme, W., Iliev, I.,	Johnson,R., Jones,C., Kamat,A., Karatas,A., Kells,C., Landers,T., Levine.R., Lindblad-Toh.K., Liu.G., Liu.X., Lui.A., Mabbitt,R.	MacLean, C., Macdonald, P., Major, J., Manning, J., Matthews, C.,	McCarthy,M., Meldrim,J., Meneus,L., Mihova,T., Mienga,V., Murphy,T., Naylor,J., Nquyen,C., Nquyen,T., Nicol,R., Norbu,C.,	O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K.,	Filulivially, F., Fielle, N., Rachupka, A., Ramasamy, U., Raymonu, C., Retta, R., Rise, C., Rogov, P., Roman, J., Schauer, S., Schupback, R.,	Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N.,	Journal Topham, K., Travers, M., Vassiliev, H., Venkataraman, V.S., Viel, R.,	Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L.,	Zimmer,A. and Zody,M. TITLE Direct Submission JOHNNAL Submitted (13-JHL-2004) Whitehead Institute/MIT Center for Genome	Research, 320 Charles Street, Cambridge, MA 02141, USA	COMMENT On Jul 13, 2004 this sequence version replaced gi:45861136. All repeats were identified using RepeatMasker:	omit, A.F.A. & Green, F. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html	Genome Center Center: Whitehead Institute/MIT Center for Genome Research	Center code: WIBR Web site: http://www-seg.wi.mit.edu	Contact: sequence submissions@broad.mit.edu	
Ē	- B	REF	Ā												E	5	REF	¥													EE		S COM					
_			•											*																								
70.00	4716	1035	3516	2065	4322	2974	3884	9866		<800	14541	1622	1353	1353		4903	3654	4903	1035	2	<800	<800	1223		9124	<800	<800	9000	0706	4903		Gaps 0;					-JUL-2004	SEQUENCING
0	0 1 1 0 1 1	1000	3530	2078	4329	2938	3949	3335		276	14499 1	1616	1392	1334		5009	3696	4936	1045	)	78	332	1212	101	9379	708	36	10000	0 1	4755	Length 195568;	0,					ITG 1	*
	:	0	4		8				;	B :	н	4					_		!	:			-	:	:	_		:	:	10		Indels					linea	KZ4 map
7707	9	<800	2134	4045	1898	1175	7802	4771		1248	2391	10724	<800	4338		5613	2391	5613	1540		808	2235	3294	Ċ	9327	4771	<800	4339	ָ ר	5055	DB 9;	es 1;					DNA	KP24-14
6303		532		3928	1923	1170	7639	4829		1261	2453	10814	19	4195	1 6	5212	2329	5718	1573		962	2313	3318	1 6	1856	4878	485	4306		5247	Score 16.8; Pred. No. 1	smatc	c 20	c 41788			144393 bp	me 18 clone
٥	2	11766	1976	9694	4409	727	1239	4879		<b>6800</b>	<800	993	<800	2255	Ġ	008>	7822	2732	1495		<b>×</b> 800	4653	1698		5/43	2732	6491	1801	1	<800	84.0%;		AAGGGACC	AAGGGACA			1	:nromosor
375		12146	1957	9701	4438	782	1229	4907		489	510	970	722	2188	1011	906	7825	2653	1503		273	4684	1764		5/36	2592		1887		156	Similarity	14; Conservative	SCAUGG	41807 CTGGCATGGCTAAGGGACAC			AC108403 144393 bp DNA linear B	MUS MUSCUIUS O
	•		1	•	•	•	•	I	•	•	•	•		•	1	İ	i	•			i		•	•	i	i		1	i		Query Match Best Local	Matches 14; Conser	0y 1	Db 41807			LOCUS AC	

nter for Genome USA 45861136. me Research 딭 Web site: http://www-seq.wi.mit.edu

AC108403 144393 bp DNA linear HTG 13-JUL-2004
Mus musculus chromosome 18 clone RP24-143K24 map 18, \*\*\* SEQUENCING
IN PROGRESS \*\*\*.
AC108403
AC108403.11 GI:50253677
HTGS. PHAGE2; HTGS. FULLTOP; HTGS\_ACTIVEFIN.
Mus musculus (house mouse)
Mus musculus chromose mouse)
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
I (bases 1 to 144393)
Birren, B., Nusbaum, C. and Lander, E.

VERSION KEYWORDS SOURCE ORGANISM

ACCESSION

REFERENCE AUTHORS

\* NOTE: This is a 'working draft' sequence. It currently consists of 1 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

\* This sequence will be replaced

```
ö
                                                                                                                                                                                                                                                                                                                          Query Match

83.0%; Score 16.6; DB 2; Length 144393;
Best Local Similarity 78.9%; Pred. No. 2.5e+02;
Matches 15; Conservative 3; Mismatches 1; Indels 0; Gaps
* by the finished sequence as soon as it is available and
* the accession number will be preserved.
1 144393: contig of 144393 bp in length.
1 10cation/Qualifiers
1 .144393
/organism="Mus musculus"
/mol_type=apenomic DNA"
/db_xref="taxon:10090"
/chromosome="18"
/dmp="l8"
/db_xref="taxon:10090"
/chromosome="18"
/clone="RP24-143X24"
/clone="RP24-143X24"
                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                    ORIGIN
```

Search completed: March 15, 2005, 12:35:12 Job time : 397.807 secs

Q à

```
New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ananvoranich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                               misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-APR-1999;
                                                                                                                                                                                                                                                                                                                      05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                     AAZ57640;
                                                                                                                                                                                                                                                                 RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                              Aa257637 Trans-act
Ad166390 Human Nkd
Aaq88793 Rat IL-2
Aa313989 PCR prime
Aaa92220 Hsc70-PRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Adr47042 Dengue vi
Adt48967 PCR prime
Aat30818 HDV riboz
Aav42395 Reverse P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aat30818 HDV riboz
Aav42395 Reverse P
Aav60155 Reverse P
Aav70715 Reverse p
Aaz92931 Hepatitis
Aaz92804 Hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aaz57640 Nucleotid
Aaz57636 Trans-act
Aaz57638 Trans-act
Aaz57637 Trans-act
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HSC70-PYE
HSC70ATPa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepatitis
Hepatitis
                                                  March 15, 2005, 11:20:37; Search time 110.965 Seconds (without alignments) 1066.957 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aaq88793 1
Aaa31989 1
Aaa92220 1
Aaa92212 1
Aaa92216 1
Aav70405 1
5.1.6
Compugen Ltd.
                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                      4390206 seqs, 2959870667 residues
version - 2005 (
                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAQ88793
AAZ21989
AAA92220
AAA92216
AAA92216
AAV10405
AAX78133
ADT48967
AAT30818
AAT30818
AAV42395
AAV60155
AAV60155
AAV60155
AAV60155
AAV60155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADL66390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ57640
AAZ57636
AAZ57638
AAZ57633
                                                                                                          1 Ъквдсаиддсиаадддассс 20
                                                                                                                           IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                  geneseqn2003cs:*
                                                                                                                                                                                                                                                                                                                                                          geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                                    geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                            geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                     geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                              geneseqn2002as:*
                                                                                                                                                                                                                                                                                                                                geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                       geneseqn2003bs:*
                                                                                                                                                                                                                                                       N_Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                                             geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                      geneseqn2002bs:*
                                                                                                                                                                                                                                                                 geneseqn1980s:*
geneseqn1990s:*
                                                                                                                                                                                                                                                                                   geneseqn2000s:*
                                                                                         US-09-699-667E-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3222233333333
                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match Length
        Copyright
                                                                                                                                                                                         Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13.88
13.88
13.88
13.88
13.88
13.88
13.88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18.4
18.4
18.4
18.4
19.4
14.2
                                   OM nucleic
                                                                                                                                                       Searched:
                                                                                                           Sequence:
                                                                                                                                                                                                                                                          Database
                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20011111111
200849710087694
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
```

```
Ado13943 Eukaryoti
Adr47041 Dengue vi
Adr49066 PCR prime
Adg86174 Primer HD
Aav20850 HDD forwa
Aav20184 Porward P
Aav70745 Forward P
Aaz2269 Hepatitis
Aa12842 Hepatitis
Aa12842 Hepatitis
Adj30422 Hepatitis
Adj30422 Hepatitis
Adj30422 Hepatitis
Adj30422 Hepatitis
Adj30422 Human mic
Aac5993 Human ren
Aac6993 Human ren
Aax2728 Test sequ
Abk2773 DNA bindi
Ade80312 Duplex ol
Aal30821 Human SNP
           Hepatitis
                                                                                                                                                                                                                                                               /*tag= a
/bound_moiety= "Bimolecular ribozyme RzB fragment"
/note= "Forms double-stranded region with bases 37-30 of
sequence AAZ57639"
                                                                                                                                                                                                                                                                                           /*tag= b
/bound moiety= "Bimolecular ribozyme RzB fragment"
/note= "Forms double-stranded region with bases 6-1 of
sequence AAZ57639"
                                                                                                                                                                                                              Nucleotide sequence of bimolecular ribozyme RzB fragment.
                                                                                                                                                                                                                        Bimolecular ribozyme; viral RNA cleavage; RzA fragment; inherited disease; 88.
                                                                                                                                                   ALIGNMENTS
          ADI30384
ADO13943
ADR47041
ADT48966
                                                                                 ABK46315
ADI30422
ADO13981
ACI12159
                                                                                                                             ADE80312
AAL30821
                                      AAQ86174
AAT30850
AAV42425
AAV60184
AAV70745
AAZ92969
AAZ92842
                                                                                                       AAQ69532
AAT63994
                                                                                                                        ABK82773
                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                              BP
                                                                                                                                                                                                                                                                                                                                            99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                      98CA-02230203
 AAZ57640 standard; RNA; 20
                                                                                                                                                                                                   (first entry)
 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

Lafontaine D;

Ś

U

0 0 0 0 0 0

ð g

```
This is the nucleotide sequence of ribozyme deltaRzP1.1. This ribozyme cleaves substrate SP1.1 (see AAS7641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleave site of the substrate (cleavage site of the substrate (cleavage site of the substrate nucleotide is present 5' to the cleavage site of the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzymes also have other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'bound moiety= "SP1.1 substrate bases (AAZ57641) 5-11"
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Frans-acting antigenomic delta ribozyme; viral RNA cleavage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-acting antigenomic delta ribozyme nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                Score 18.4; DB 3; Length 57;
Pred. No. 7.7;
3; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                             therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                            Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lafontaine D;
diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                    Example 1; Fig 1A; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                          1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                               38 UUCGCAUGGCUAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perreault J, Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                    92.0%;
                                                                                                                                                                                                                                                                                                                                                                                   85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ57638 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 85.05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
20..25
/*tag=
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
/*tag=
/*..57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30. .45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52. .57
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inherited disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-096791/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UYSH ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-2003
05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                  This ribozyme cleaves substrate SP1.1 (see AAZ5641). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.1) that is constructed to have a substrate binding portion with the following sequence 3 -UNNXNN -5. The substrate of the enzyme has the sequence 5 -H* *GNNHNN-3. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of sepresented by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave to substrate with the enzyme. The enzyme is used to cleave viral RNA or RNA causing for example an inherited disease. The enzyme also have other therapeutic, biotechnological and diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trans-acting antigenomic delta ribozyme, deltaRzP1.1 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20. .25
/*tag= c
/bound moiety= "SP1.1 substrate (AAZ57641) bases 5-11"
30. .45
52. .57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= e
/note= "Forms a double stranded region with bases 6-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag= a
note= "Forms double stranded region with bases 52-57"
                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                       This is the nucleotide sequence of bimolecular ribozyme RzB fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                       ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-acting antigenomic delta ribozyme; viral RNA cleavage; inherited disease; deltaRzPl.1; ss.
                                                                                                                                                                                                                                                                                                                                                   DB 3; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                               Sequence 20 BP; 4 A; 6 C; 8 G; 0 T; 2 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                 Score 18.4; DR
Pred. No. 6.9;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                           BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGCAUGGCUAAGGGACCC 20
                    Example 5; Fig 4; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 85.0%;
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57636 standard; RNA; 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7. .19
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-096791/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VINU ( HSYU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stem loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ57636;
```

ô

```
primer; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADL66390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADL66390
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                        This is the nucleotide sequence of a trans-acting antigenomic delta ribozyme of the invention. This ribozyme cleaves substrate Spl.1 (see AAZ57641). The invention relates to a nucleic acid enzyme (e.g. deltaR2P1.1) that is constructed to have a substrate binding portion with the following sequence 3'-UNXXNN-5'. The substrate of the enzyme has the sequence 5'-I'*GNNHNN-3'. The binding portion of the enzyme (ribozyme) hase pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site is represented by *). At least one nucleotide is present 5' to the cleavage site of the substrate enucleotide sequence at a specific cleavage site by mixing the substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave a substrate with the enzyme. The enzyme is used to cleave tharspentic, biotechnological and disagnostic applications. (Updated on 15-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Trans-acting antigenomic delta ribozyme, deltaRzP1.2 nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20. 25

/*tag= c

/*tag= c

/*bound moiety= "SP1.2 substrate bases (AAZ57634) 6-11"

30. 45

/*tag= d

52. 25

/*tag= e

/*tag= e

/*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= a
/note= "Forms double stranded region with bases 52-57"
7. .19
/*tag=_ b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                       New construction of nucleic acid enzyme useful for biotechnological, diagnostic and therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-acting antigenomic delta ribozyme; viral RNA cleavage;
inherited disease; deltaRzP1.2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92.0%; Score 18.4; DB 3; Length 57; 85.0%; Pred. No. 7.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ananvoranich S, Lafontaine D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38 CGGCCAUGGCUAAGGGACCC 57
                                                                                                 Example 1; Fig 2; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98CA-02230203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-CA000391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ57637 standard; RNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perreault J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09955856-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ57637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AZZ 74 A AZZ 7637 A AZ
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
This is the nucleotide sequence of ribozyme deltaRzP1.2. This ribozyme cleaves substrate SP1.2 (see AAZ57634). The invention relates to a nucleic acid enzyme (e.g. deltaRzP1.2) that is constructed to have a substrate binding portion with the following sequence 3'-UNNXNN-5'. The substrate of the enzyme has the sequence 5'-H'*CNNHNN-3'. The binding portion of the enzyme (ribozyme) base pairs to 6 nucleotides 3' to the cleavage site of the substrate (cleavage site of sequenced by *). At least one nucleotide is present 5' to the cleavage site of the substrate sequence. The enzyme of the invention is used to cleave a substrate nucleotide sequence at a specific cleavage site by mixing the substrate with the enzyme. The enzyme is used to cleave with the substrate for example an inherited disease. The enzymes also have other therapeutic, biotechnological and disagnostic applications. Note: This sequence is not shown in the specification, but has been derived from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New CGX polypeptides and polynucleotides, useful in diagnosing, treating and/or preventing colon and gastric cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human, colon and gastric cancer-associated, CGX protein, colorectal cancer, colon cancer, gastric cancer, antisense therapy, gene silencing, drug screening; detection, diagnosis; predisposition, cytostatic, vaccine, CGX7, NKd1, reverse transcription-PCR, RT-PCR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
New construction of nucleic acid enzyme useful for biotechnological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 18.4; DB 3; Length 57; Pred. No. 7.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 57 BP; 7 A; 21 C; 19 G; 0 T; 10 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                   deltaRzP1.1 sequence (AAZ57636) shown in figure 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human Nkdl (CGX7) RT-PCR primer, SEQ ID NO:46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3; Mismatches
                        diagnostic and therapeutic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; SEQ ID NO 46; 228pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38 UUCGCAUGGCUAAGGGACCC 57
                                                                    Example 1; Page; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-AUG-2003; 2003WO-JP010436.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-AUG-2002; 2002US-0407338P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 85.0%;
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ONCO-) ONCOTHERAPY SCI INC. (UYTY ) UNIV TOKYO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADL66390 standard; DNA; 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Furukawa Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-239234/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2004021010-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nakamura Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-MAR-2004.
```

```
The invention relates to finding nucleic acids which are differentially proteins and their encoding nucleic acids which are differentially expressed in colorectal or gastric cancer. 7 of the 8 CKG genes cidentified showed increased expression in colorectal cancers while the eighth CCX protein. LAPTWAbeta (CCX8), showed increased expression in colorectal cancers while the cighth CCX protein. LAPTWAbeta (CCX8), showed increased expression in colorectal cancers while the cighth (CCX7) were known but had not previously been associated with colon cancer, and 5 were novel. The novel colon cancer-associated genes are in MCX1 (CCX1, ADL66345); C20orf20 (CCX1, ADL66351); and NFX11 (CCX1, ADL66345); C20orf20 (CCX1, ADL66352) and ADL66352 and ADL66353; and NFX11 (CCX1, ADL66349); LEWDIL (Doth designated CGX4, ADL66351, ADL66351, ADL66352, ADL66352, ADL66352, ADL66353, ADL66352, ADL663
   invention relates to human colon and gastric cancer-associated (CGX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 primer used in an example of the invention.
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
```

Gaps ö Score 15; DB 12; Length 29; Pred. No. 4.6e+02; 2; Indels Sequence 29 BP; 4 A; 9 C; 11 G; 5 T; 0 U; 0 Other; 4; Mismatches 2 KSGCAUGGCUAAGGGACCC 20 GCGCATGGCTTAGGGACGC 27 75.0%; Local Similarity 68.4 tes 13; Conservative Query Match Matches ò

ö

Rat IL-2 upstream PCR primer # 1. AAQ88793 standard; DNA; 39 (revised)
(first entry) 25-MAR-2003 22-AUG-1995 Synthetic. AAQ88793; AAQB 3793

MAQB 8793

MACA AAQB

MACA AAQB RESULT 6

Interleukin-2; IL-2; PCR primer; plasmid pMV261; ss.

94WO-US008215 93US-00096027 22-JUL-1993; WO9503418-A2 22-JUL-1994; 02-FEB-1995.

(WHED ) WHITEHEAD INST BIOMEDICAL RES. (BETH-) BETH ISRAEL HOSPITAL ASSOC

Murray PJ; Young RA, Dewolf WC, Aldovini A, Duda RB, WPI; 1995-075244/10 Odonnell MA,

Seguence 30 BP; 8 A; 5 C; 12 G; 5 T; 0 U; 0 Other;

ö A set of E.coli-BCG shuttle plasmids were constructed to permit prodn. of IL-2. Three sets of paired oligo primers were utilised in the PCR with appropriate templates to produce insert DNAs with ends suitable for cloning in the plasmid pWV261. The oligo primers were AAQ88793-Q88798, primer nos. 1-6 respectively. The rat and mouse IL-2 upstream primers no. 1 and no. 3 respectively were constructed to anneal with the IL-2 coding regions starting at codon 21 thereby excluding their native signal peptide regions. The BCG alpha antigen downstream primer no. 4 terminated at the sequence encoding the putative protease cleavage site ala-gly-ala (Terasake et al., FEMS Lett. S8:273-276 1989. (Updated on 25-MAR-2003 to correct PN field.) This sequence represents PCR primer used to isolate DNA encoding a glucagon-like peptide-1 (GLP-1) mutein. The invention relates to a method for treating type II diabetes mellitus, by administering a GLP-1 or a GLP of mutein, particularly the mutein GLP-1GJY8. The GLP-1 mutein is an insulinotropic peptide. The method is used to treat type II diabetes (non-insulin dependent diabetes mellitus) and obesity Glucagon-like peptide-1; GLP-1; mutein; type II diabetes mellitus; insulinotropic peptide; non-insulin dependent diabetes mellitus; obesity; therapy; PCR primer; ss. New recombinant mycobacteria and plasmids - express cytokine(s), lymphokine(s), enzymes, etc extracellularly, for use as BCG vaccines and in cancer therapy. Gaps Treating type II diabetes mellitus and obesity using glucagon like ö PCR primer for glucagon-like peptide-1 mutein coding sequence. Score 14.4; DB 2; Length 39; Pred. No. 9.8e+02; 2; Mismatches 2; Indels Seguence 39 BP; 9 A; 15 C; 10 G; 5 T; 0 U; 0 Other; Example 4; Page 19; 33pp; English. Example; Page 16; 46pp; English. (MODE-) MODEX THERAPEUTIQUES SA. 20 : |||:||| |||||| || 1 GGCATGGCCAAGGGATCC 18 AAZ31989 standard; DNA; 30 BP 98US-0081562P. 99US-00081562. 99WO-IB000651. 72.0%; 3 SGCAUGGCUAAGGGACCC 28-JAN-2000 (first entry) Query Match
Best Local Similarity 77.00
Best Local 81 Conservative
The Conservative WPI; 2000-013103/01. WO9953064-A2. 13-APR-1999; 13-APR-1998; 12-APR-1999; 21-OCT-1999, Synthetic. Thorens B; AAZ31989; peptide RESULT 7 AAZ31989 ò g

ATPase; Hsp70; heat shock protein; cytotoxic T lymphocyte; CTL; immune response; infectious disease; malaria; cytotoxic T cell; cytostatic; immunostimulant; cellular immune response inducer; protozoacide; leukaemia; cancer; primer; 88.

Hsc70-PYE oligonucleotide primer SEQ ID NO:62

(first entry)

05-JAN-2001

AAA92212;

뭠

AAA92212 standard; DNA; 24

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present sequence represents a primer which is used in an example from present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a fused protein (I) prepared from a peptide containing a CTL (cyctoxic T lymphocyte) epitope recognised by cytotoxic T cells and a protein containing the ATPase domain of a heat shock protein. Also described are: (I) a drug composition containing to containing the DNA encoding (I); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (I) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer.
                                   Gaps
                                                                                                                                                                                                                                                                                                                       ATPase; Hsp70; heat shock protein; cytotoxic T lymphocyte; CTL; immune response; infectious disease; malaria; cytotoxic T cell; cytostatic; immunostimulant; cellular immune response inducer; protozoacide; leukaemia; cancer; primer; ss.
                                   ö
Score 14.2; DB 3; Length 30;
Pred. No. 1.2e+03;
i; Mismatches 2; Indels ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 24 BP; 6 A; 6 C; 6 G; 6 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                         Hsc70-PRL1a oligonucleotide primer SEQ ID NO:70.
                                 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1, Page 17, 72pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SUME ) SUMITOMO ELECTRIC IND CO.
                                                                                      :::|||:|| ||||||||
12 TTCGCATGGTGAAGGGACC 30
                                                                  1 BKSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                      BP.
71.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-FEB-2000; 2000WO-JP000941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-00041535
                                                                                                                                                                                     AAA92220 standard; DNA; 24
                                                                                                                                                                                                                                                        05-JAN-2001 (first entry)
               Local Similarity 68.4
nes 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shinbara N, Udono H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-543748/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200049041-A1
                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                        AAA92220;
   Query Match
                                 Matches
                                                                                                                                                  ઠ
                                                                                               g
```

Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer.

8

SUME ) SUMITOMO ELECTRIC IND

19-FEB-1999;

Udono H,

Shinbara N,

WPI; 2000-543748/49.

18-FEB-2000; 2000WO-JP000941

WO200049041-AI.

Synthetic.

24-AUG-2000

Example 1; Page 16; 72pp; Japanese

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          present sequence represents a primer which is used in an example from present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a fused protein (I) prepared from a peptide containing a CTL (cytotoxic T lymphocyte) epitope recognised by cytotoxic T cells and a protein containing the ATPase domain of a heat shock protein. Also described are: (1) a drug composition containing (I) as active ingredient; (2) a DNA encoding (I); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (I) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response inducer. The protein is useful as an active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against lawkaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATPase, Hsp70, heat shock protein, cytotoxic T lymphocyte, CTL, immune response, infectious disease, malaria, cytotoxic T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hsc70ATPase domain-PYE oligonucleotide primer SEQ ID NO:66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 14; DB 3; Length 24;
Pred. No. 1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 24 BP; 6 A; 6 C; 6 G; 6 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 KSGCAUGGCUAAGGGACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :: ||:| |:||||||||
TCCCATGTCTAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA92216 standard; DNA; 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA92216;
AMA922112

AMA9

AMA922112

AMA9

AM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXXXXXXXXX
```

ö

Gaps

; 0

2; Indels

70.0%; Score 14; DB 3; Length 24; 66.7%; Pred. No. 1.5e+03;

4; Mismatches

2 KSGCAUGGCUAAGGGACC 19 TCCCATGTCTAAGGGACC 23

12; Conservative

Matches

ઠે 유 RESULT 9

Local Similarity

Query Match

```
5
         (CLEV-) CLEVELAND CLINIC FOUND.
                                                                                                                                                                                                                                                                                                                                                                                      Example 1; 7pp; 54pp; English
                                                                                                                                                                                                                                                                                                                                                                         17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0065793P.
                                                                                                                                                                                                                                                                                                                               69.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-CA001065
                                                                                                                                                                                                                                                                                                                                                                         1 BKSGCAUGGCUAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAX78133 standard; DNA; 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 64.7-
Best Local Similarity 64.7-
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CONN-) CONNAUGHT LAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-385140/32.
                                                  WPI; 1998-610318/51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis D virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Parrington M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ribozyme; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9925859-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-NOV-1997;
                              Banerjee AK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX78133;
                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX78133
ò
                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                               peptide containing a CTL (cytotoxic T lymphocyte) epicpe recognised by cytotoxic T cells and a protein containing the ATPses domain of a heat shock protein. Also described are: (1) a drug composition containing (I) as active ingredient; (2) a DNA encoding (I); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (I) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response inducer. The protein is useful as an active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against leukaemia. The present sequence represents a primer which is used in an example from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HPIV-3; human parainfluenza virus type 3; vaccine; ribozyme; PCR; primer;
                                                                                                                                                                                                  Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
cytostatic; immunostimulant; cellular immune response inducer; protozoacide; leukaemia; cancer; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 14; DB 3; Length 24;
Pred. No. 1.5e+03;
4; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hepatitis delta virus anti-genome ribozyme primer.
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 24 BP; 6 A; 6 C; 6 G; 6 T; 0 U; 0 Other;
                                                                                                                                                                                                                          infectious diseases such as malaria or cancer.
                                                                                                                                                                                                                                            Example 1; Page 16; 72pp; Japanese
                                                                                                                                       (SUME ) SUMITOMO ELECTRIC IND CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rccargreraaggace 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 KSGCAUGGCUAAGGGACC 19
                                                                                              18-FEB-2000; 2000WO-JP000941.
                                                                                                                   99JP-00041535
                                                                                                                                                                                                                                                                                                                                                                                                                                         70.0%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US009270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0045805P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV70405 standard; DNA; 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 66.7
1es 12; Conservative
                                                                                                                                                          Shinbara N, Udono H,
                                                                                                                                                                                WPI; 2000-543748/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
Hepatitis D virus.
                                                    WO200049041-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9850405-A1
                                                                       24-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12-NOV-1998
                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV70405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
Thus primer encloses the steel of a negatical action of the second primer encloses the steel of the second primer for the second primer for the second primer (see AAV70404), which contains a sequence from the 3' untranslated region of thuman parainfluenza vitus type 3 (HPIV-3) is mRNA, through to the trailer portion of the HPIV-3 genome (see AAV70404), and which also primes synthesis of the ribozyme, in the PCR amplification of the ribozyme. The product was used in the construction of a full-length cDNA clone of HPIV-3. The invention relates to a system for generating recombinant HPIV such as a clone comprising a nucleotide sequence that encodes a full-length, so positive sense, anti-genome of HPIV. The invention also relates to a method of preparing recombinant HPIV 3 having site-directed mutations. Production of recombinant HPIV clones enables analysis of HPIV cranscription and replication in a cell-free system. A system which permits production of recombinant HPIV that is genetically engineered to contain site-specific mutations is useful for identifying attenuating contain site-specific mutations is useful for identifying attenuating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New vector (EV) used to express an antigen for vaccination, e.g. against human immune deficiency virus.
                                                                                                                                                                                                                                                                                           This primer encodes the 3' end of a hepatitis delta virus antigenomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alphavirus, replicon, expression vector, heterologous splice site, RNA splicing, viral RNA replication, antigen, vaccination, therapy,
New human parainfluenza virus (HPIV) clone, and - methods of clone production and introduction of site-specific mutations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 13.8; DB 2; Length 27;
Pred. No. 2e+03;
5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 27 BP; 4 A; 10 C; 6 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hepatitis D virus ribozyme fragment 2.
```

ö

NS1 protein signal; coding regions of all non-structural proteins. The charled vaccines are useful in producing preventives or/and remedies for cancer like cervical cancer and viral diseases. Such vaccines can efficiently express antigen in infected cells, which is because dengue virus can infect dendritic cells, and can effectively present antigen to provide immunity effect. Different types of dengue virus can be used to repeatedly produce efficient immune response thereby strengthening the body's immune system against the pathogen that contains such antigen. Human papillomavirus (HPV) vaccines were prepared by using a gene-expressing system using of the full-length dengue virus cDNR clone (PRS/FLD2). The recombinant virus vectors were transfected into baby lines. This sequence corresponds to an oligonucleotide used in the

ö

Gaps

; 0

ch 69.0%; Score 13.8; DB 13; Length 45; 1 Similarity 64.7%; Pred. No. 2.1e+03; 11; Conservative 5; Mismatches 1; Indels (

Query Match Best Local S

Matches

1 BKSGCAUGGCUAAGGGA 17

ò

ö

Gaps

; 0

Sequence 45 BP; 16 A; 8 C; 13 G; 8 T; 0 U; 0 Other;

recombinant replicon of the invention.

```
This invention describes the construction of a novel expression vector.

(EV) containing an alphavirus replicon having a heterologous splice site.

The expression vector contains (i) a DNA molecule (I) complementary to at least part of an alphavirus RNA genome, and (ii) inserted into a region of (II) that is not essential for its replication, a heterologous DNA (II) under control of a promoter. (I) includes at least one heterologous splice site (HSS) to prevent aberrant RNA splicing of the alphavirus and is the complement of the complete alphavirus genomic region essential for replication of viral RNA. The expression vector is used to express (II) in humans or animals, e.g. to express an antigen for vaccination (against human immune deficiency virus) or to produce a therapeutically active protein or peptide. Introducing an HSS: (I) makes it more likely that any protein will occur at this site, rather than at a cryptic splice site; (2) restores function of the alphavirus when eliminated, and (3) may improve transport of RNA from the nucleus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ss; cytostatic; virucide; dengue virus; recombinant replicon; deletion; preM protein; C protein; NS1 protein signal; vaccine; cervical cancer; viral disease; antigen; dendritic cell; immune response;
                                                                                                                                                                                                                                                                                                                                                 69.0%; Score 13.8; DB 2; Length 41; 64.7%; Pred. No. 2.1e+03;
                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                Sequence 41 BP; 11 A; 10 C; 15 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
(TENG-) TENGEN BIOMEDICAL CO.
(BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV C.
                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 2.1e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue virus vaccine oligonucleotide #17.
Disclosure, Fig 9; 60pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                         23 CTCGGATGGCTAAGGGA 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADR47042 standard; DNA; 45 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JAN-2004; 2004WO-CN000088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JAN-2003; 2003CN-00115272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-NOV-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                     11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human papillomavirus
                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2004072274-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-AUG-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADR47042;
                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                     datches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

```
constructed from encephalitis B virus and a recombinant genome, where the genome is inserted with an exogenous nucleotide sequence for recombination and capable of retaining its self-replication function rivers is useful in producible the bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B. Such vaccines are producible at low cost and have high immunoefficiency, in which the recombinant virus can efficiently express the antigen of hepatitis B virus with the safety and immunogenicity of attenuated encephalitis B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bivalent vaccines for preventing and treating Japanese (B) encephalitis and hepatitis B produced by recombinant technique using encephalitis B virus as vector to express antigen gene of hepatitis B.
                                                                                                                                                                                                                                 œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus vaccines. The current sequence represents a PCR primer used in an
                                                                                                                                                                                                                               Virucide, Japanese encephalitis B virus; bivalent vaccine; hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a recombinant Japanese encephalitis B virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ပ်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BEIJ-) BEIJING ORIENTAL TENGEN TECHNOLOGY DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SHAN-) SHANGHAI TENGEN BIOMEDICAL CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 8; SEQ ID NO 31; 33pp; Chinese.
ADT48967 standard; DNA; 45 BP
                                                                                                                                                                                                                                                                                                                                                                                                                   20-MAR-2003; 2003CN-00115912.
                                                                                                                                                                                                                                                                                                                                                                                   19-MAR-2004; 2004WO-CN000232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TENGEN BIOMEDICAL CO
                                                                                                                                                                                                PCR primer 5'pA, seq id 31
                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-699719/68.
                                                                                                                                                                                                                                                    PCR; primer; ss.
                                                                                                                                                                                                                                                                                                                 WO2004082712-A1.
                                                                                                                                                                                                                                                                                   Unidentified.
                                                                                                                                                                 16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                  30-SEP-2004.
                                                                                                                                ADT48967;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pang X;
                                                                 RESULT 14
                                                                                ADT48967
                                                                                                               d
```

A dengue virus recombinant replicon has a deletion of the complete coding sequence for preM protein of dengue virus and also includes elements of e.g. the non-coding region in the whole of the 5'-end, the coding region of the front 20 amino acids in the C protein, and the coding region of

Virus-like particle vaccines containing dengue virus recombinant replicon as core for carrier, applicable in preventives or/and remedies for tumors like cervical cancer and viral diseases.

WPI; 2004-625870/60.

Pang X;

Chinese.

Example 4; SEQ ID NO 39; 38pp;

```
;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Primer SHDV84R (AAT30818) contains a buffer sequence allowing enzyme digestion, a SacI site, and a hepatitis delta virus (HDV) ribozyme sequence. It was used with nested primer HDV17-68 (AAT30817) and forward primer SHDV1F (AAT30815) to generate an HDV ribozyme. This antigenomic ribozyme can be placed between the polyA tract at the 3' end of a Sindbis virus-based eukaryolic layered vector initiation system, ELVIS, and the transcription terminal signals to produce alphavirus expression vectors useful in methods of gene therapy and for vaccine produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New recombinant alpha-virus vectors - used to develop prods and methods for use in gene therapy and in the prodn. of vaccines.
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dubensky TW, Polo JM, Ibanez CE, Chang SMW, Jolly DJ, Driver DA;
Belli BA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alphavirus; Sindbis virus; vector; gene therapy; vaccine; primer; polymerase chain reaction; PCR; ELVIS; ribozyme; HDV; hepatitis delta virus; ss.
                                                                                                                                                                                                                ;
0
                                                                                                                                  Query Match 69.0%; Score 13.8; DB 13; Length 45; Best Local Similarity 64.7%; Pred. No. 2.1e+03; Matches 11; Conservative 5; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69.0%; Score 13.8; DB 2; Length 48; 64.7%; Pred. No. 2.1e+03; Artive 5; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 48 BP; 7 A; 17 C; 10 G; 14 T; 0 U; 0 Other;
                                                                   Sequence 45 BP; 16 A; 8 C; 13 G; 8 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 3; Page 85; 256pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94US-00348472.
95US-00376184.
95US-00405827.
                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGA 17
                                                                                                                                                                                                                                                                                                                                4 CTCGGATGGCTAAGGGA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAT30818 standard; DNA; 48 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95WO-US015490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HDV ribozyme primer SHDV84R
example from the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHIR ) CHIRON VIAGENE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 64.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1996-277785/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-NOV-1994;
18-JAN-1995;
15-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-NOV-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9617072-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-JUN-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAT30818;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
AAT30818/C
AAT30818/C
AACA AAT30
AAT30
AAT30818/C
AAT30

                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                      g
```

ö

Gaps

.; 0

Search completed: March 15, 2005, 16:13:07 Job time : 111.965 secs

ò

OM nucleic

Run on:

Sequence:

Searched:

Database

```
Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9955865-A 44 04-NOV-1999;

ANANVORANICH SIRINART (CA): LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBENOKE (CA)

Location/Qualifiers

1. 57

/vrganism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
AR368180 Sequence
AR021046 Sequence
AR0413461 Sequence
AR183815 Sequence
AR183815 Sequence
AR3681218 Sequence
130158 Sequence
130158 Sequence
130159 Sequence
130159 Sequence
129410 Sequence
129410 Sequence
AR022670 Sequence
129410 Sequence
AR209334 Sequence
AR344881 Sequence
AX544881 Sequence
AX544882 Sequence
AX544881 Sequence
AX544882 Sequence
AX544882 Sequence
AX544882 Sequence
AX544882 Sequence
AX54483 Sequence
AX545650 Sequence
AX545651 Sequence
AX545651 Sequence
AX545651 Sequence
AX545653 Sequence
AX545653 Sequence
AX545653 Sequence
AX545653 Sequence
AX545653 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 57
                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 92.0%; Score 18.4; DB 6; Similarity 75.0%; Pred. No. 44; 15; Conservative 5; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                         other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57 bp
Sequence 45 from Patent W09955856.
AX012283
AX012283.1 GI:9998344
                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                   AX012282 57 bp
Sequence 44 from Patent WO9955856.
                                        AR183835
AR368218
AR063795
                                                                                                                                         CQ005389
AX544881
AX544882
                                                                                                                                                                                 AR305352
AR309456
BD106263
AX545650
AX545651
AX545653
AX545653
                                                                      I30158
AR063796
                                                                                                    AR032670
                                                                                                                                 AR209334
                                                                                                                                                                        AX544883
                                                                                                             129410
191084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                         AX012282
AX012282.1 GI:9998343
                                                                                                                                                                                                                                                                                                                                                                                      synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 15; Conserv
   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                 RESULT 1
AX012282
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
AX012283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
    ORIGIN
     000000
                                                                                                                                            υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012282 Sequence
AX012283 Sequence
AX012284 Sequence
AX012285 Sequence
AX012286 Sequence
AX012289 Sequence
AX012289 Sequence
AX012289 Sequence
AX012289 Sequence
AX012295 Sequence
AX012295 Sequence
AX012295 Sequence
AX01289 Sequence
AX01597 Sequence
AX01597 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR021008 Sequence
AR043423 Sequence
AR062338 Sequence
AR183797 Sequence
                                                                     March 15, 2005, 12:35:18; Search time 394.386 Seconds (without alignments) 2457.248 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                      1981570
            5.1.6
Compugen Ltd.
                                                                                                                                                                                 4708233 seqs, 24227607955 residues
                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
             GenCore version (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                     - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012285
AX012286
AX012286
AX012280
AX012289
AX012290
AX012290
AX012392
AX012392
AX012392
AX012392
AX012393
AX013393
                                                                                                                                 1 bkвдсаиддсиаадддассс 20
                                                                                                                                                    IDENTITY_NUCDX
Gapop 10.0 , Gapext 1.0
                                                                                                            US-09-699-667E-66
20
                                                                                                                                                                                                                                                                                                                                                                                               gb_ro:*
gb_sts:*
gb_sy:*
gb_un:*
                                                                                                                                                                                                                                                                                                       gb_htg: *
gb_ov: *
gb_ov: *
gb_bt: *
gb_bt: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
                                                                                                                                                                                                                        Minimum DB seq length: 0 Maximum DB seq length: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match
                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44446611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
```

PAT 06-SEP-2000

ô

Gaps

ö

PAT 06-SEP-2000

00000

Result No.

ORIGIN

ò 셤 LOCUS

ઠે g

```
ö
                                                                                                                                                                                                                                                                                                                                PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 955856-A 49 04-NOV-1999;
ANANVORANICH SIRINAT (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9558565-A 80 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERERÇOKE (CA)
                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Length 57;
                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                        Length
                                                                                                                                        9
                 1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="teaxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
/noTe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .57
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon:32630"
/noTes"synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                  RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.0%; Score 18.4; DB 75.0%; Pred. No. 44; iive 5; Mismatches
                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences.
                                                                                                                                      92.0%; Score 18.4; I
75.0%; Pred. No. 44;
ive 5; Mismatches
                                                                                                                                                                                                                                                                                                                             Sequence 48 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57 bp
Sequence 49 from Patent WO9955856.
AX012287
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                            1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX012287.1 GI:9998348
                                                                                                                                                                                                                                                                                                                                                                                    AX012286.1 GI:9998347
                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                        Best Local Similarity 75.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 92.0
Best Local Similarity 75.0
Matches 15, Conservative
                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
AX012287
                                                                                                                                                                                                                                                                                                  RESULT 5
AX012286
   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                              임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 995886-A 46 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHEREROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Batent: WO 995586-A 47 04-NOV-1999;
ANANVORANICH SIRINART (CA); IMPENTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                  Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: W0 9958856.A 45 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Сарв
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                              92.0%; Score 18.4; DB 6; Length 57; 75.0%; Pred. No. 44; 1.1ve 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 92.0%; Score 18.4; DB 6; Length 57; Best Local Similarity 75.0%; Pred. No. 44; Matches 15; Conservative 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/mol type="unassigned RNA"
/db_xref="taxon:32630"
/nofe="synthetic nucleic acid"
                                                                                                                                                           /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/nofe="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other sequences; artificial sequences.
   other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 46 from Patent W09955856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 47 from Patent WO9955856.
                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                    1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                        38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38 CGGCATGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX012284.1 GI:9998345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX012285.1 GI:9998346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                    15; Conservative
                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                             Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
AX012285
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
AX012284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

g

```
PAT 06-SEP-2000
                                                                                                                                                                                                                             Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: W0 9955856-A 52 04-NOV-1999;

RANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
1. 57

/organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xrefe="unassigned RNA"
/hote="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ananvoranich, S., Lafontaine, D. and Perreault, J.P.

Nucleic acid enzyme for rna cleavage
Patent: WO 9958856-A 54 04-007-1999;

PANANVORANICH: SIRINART (CA). LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 24-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                      92.0%; Score 18.4; DB 6; Length 57; 75.0%; Pred. No. 44; 1. Indels 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88.0%; Score 17.6; DB 6; Length 18; 83.3%; Pred. No. 1.4e+02; ive 3; Mismatches 0; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="synthetic construct"
|mol_type="unassigned DNA"
|bxref="taxon:32630"
|noTe="synthetic nucleic acid"
                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CQ786869 29 bp DNA Sequence 46 from Patent WO2004021010.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                 synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 54 from Patent W09955856.
                                                                          57 bp
Sequence 52 from Patent WO9955856.
AX012290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 BKSGCAUGGCUAAGGGACCC 20
38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCATGGCTAAGGGACCC 18
                                                                                                                                 AX012290.1 GI:9998351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012292.1 GI:9998353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
CQ786869
LOCUS
DEFINITION 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                 DEFINITION
                                                                                                                                                                                  ORGANISM
                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
AX012292
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                              RESULT 9
AX012290
LOCUS
                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                ö
                                                                                                                                                                                                   PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                 Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Nucleic acid enzyme for rna cleavage
Patent: WO 9955656.A 50 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ananvoranich, S., Lafontaine, D. and Perreault, J.P.
Nucleic acid enzyme for rna cleavage
Patent: WO 9953856-A 51 04-NOV-1999;
ANANVORANICH SIRINART (CA); LAFONTAINE DANIEL (CA); PERREAULT JEAN
PIERRE (CA); UNIV SHERBROOKE (CA)
Location/Qualifiers
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
               Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 92.0%; Score 18.4; DB 6; Length 57; Best Local Similarity 75.0%; Pred. No. 44; Matches 15; Conservative 5; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 57;
                                                                                                                                                                                                   linear
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92.0%; Score 18.4; DB 6;
75.0%; Pred. No. 44;
iive 5; Mismatches 0;
             Score 18.4; DB 6;
Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
/note="synthetic nucleic acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="synthetic construct"
/mol_type="unassigned RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note="synthetic nucleic acid"
                                                                                                                                                                                                   RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RNA
                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences.
                                              5; Mismatches
                                                                                                                                                                                                        Sequence 50 from Patent WO9955856.
AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 51 from Patent W09955856.
AX012289
                                                                                                                                                                                              57 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57 bp
                                                                             1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                  38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38 TTCGCATGGCTAAGGGACCC 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 BKSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                  AX012288.1 GI:9998349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX012289.1 GI:9998350
            ch 92.0%;
1 Similarity 75.0%;
15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 75.0
Matches 15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .57
             Query Match
Best Local Similarity
                                                                                                                                                                                                   AX012288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX012289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
AX012289
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                Matches
                                                                                                                                                               RESULT 7
AX012288
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
```

ð 셤

```
1. .27
/organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"
Location/Qualifiers
                                                                                                                             3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                     1 GGCATGGCCAAGGGATCC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Topology: Linear;
                                                                                                                                                                                                                                                         I33404.1 GI:1824195
                                                                          Query Match
Best Local Similarity 77.8
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unidentified unclassified.
                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ECC PP PP E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
KEYWORDS
              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
BD191969/c
LOCUS
                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                  ORIGIN
                                                                                                                                                                                                          133404
                                                                                                                              ò
                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                PAT 05-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
Unknown.
Unclassified.
Unclassified.
O'Donnell,M.A., Duda,R.B., DeWolf,W.C., Aldovini,A. and Young,R.A.
Recombinant mycobacterial vaccines
Patent: US 5776465-A 4 07-JUL-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps

    .29
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
/note="Artificially synthesized primer sequence for RT-PCR"

                                                                                     Nakamura, Y. and Furukawa, Y.

Method of diagnosing colon and gastric cancers

Patent: WO 2004021010-A 46 11-MAR-2004;

Oncotherapy Science, Inc. (JP); Japan as represented by the president of the university of Tokyo (JP)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72.0%; Score 14.4; DB 6; Length 39; 77.8%; Pred. No. 8.4e+03; Live 2; Mismatches 2; Indel8
                                                                                                                                                                                                                                                                     75.0%; Score 15; DB 6; Length 29; 68.4%; Pred. No. 3.9e+03; Live 4; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                     synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .39
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 39)
Aldovini,A. and Young,R.A.
Recombinant mycobacterial vaccines
Patent: US S830475-A 4 03-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39 bp. Sequence 4 from patent US 5830475. AR050904.1 GI:5974268
                                                                                                                                                                                                                                                                                                                                                                                                            39 bp
Sequence 4 from patent US 5776465.
AR015975.
AR015975.1 GI:3972252
                                                                                                                                                                                                                                                                                                                         2 KSGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                       3 SGCAUGGCUAAGGGACCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CQ786869.1 GI:45721861
                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 68.4<sup>§</sup>
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 14; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
AR050904
LOCUS
                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
AR015975
            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

```
27 bp DNA linear PAT 17-JUL-2003 BD191969 1 GI:33001708 Unidentified
Unidentified
                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassified.
Unclassified.
1 (bases 1 to 39)
O'Donnell, M.A., Duda,R.B., DeWolf,W.C., Aldovini,A. and Young,R.A.
Recombinant BCG
Patent: US 5591632-A 4 07-JAN-1997;
Location/Qualifiers
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Chases | Lo 27|
| Chases | Lo 27|
| Eneriee, A.K. and Hoffman, M.A. |
| Eneriee, A.K. and Hoffman, M.A. |
| Infectious clone for human parainfluenza virus type 3 |
| Infectious clone for human parainfluenza virus type 3 |
| Infectious clone clone for human parainfluenza virus type 3 |
| Infectious clone clone for human parainfluenza virus type 3 |
| Infectious clone clone for human parainfluenza virus type 3 |
| Infectious clone clo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 72.0%; Score 14.4; DB 6; Length 39; Best Local Similarity 77.8%; Pred. No. 8.4e+03; Matches 14; Conservative 2; Mismatches 2; Indels
                                                                                                                                                                                        Length 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                              2; Indels
                                                                                                                                                                                        72.0%; Score 14.4; DB 6;
77.8%; Pred. No. 8.4e+03;
iive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                        /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39 bp
Sequence 4 from patent US 5591632.
133404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
organism="unknown"
```

```
ORIGIN
```

Gaps ó Query Match 69.0%; Score 13.8; DB 6; Length 27; Best Local Similarity 64.7%; Pred. No. 1.9e+04; Matches 11; Conservative 5; Mismatches 1; Indels

ö

1 BKSGCAUGGCUAAGGGA 17 :::| |:|||:|||||| 26 CTCGGATGGCTAAGGGA 10

g ò

Search completed: March 15, 2005, 18:04:59 Job time: 395.386 secs

THIS PAGE BLANK (USPTO)